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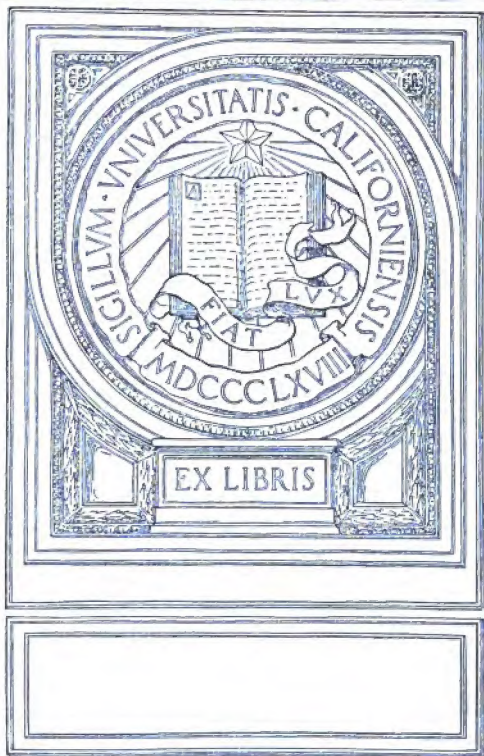
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~~Henry Richardson~~

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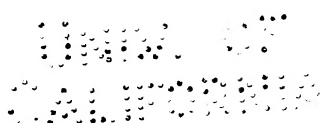
ESSAYS FOR COLLEGE ENGLISH

SELECTED AND EDITED

BY

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IOWA STATE COLLEGE



Second Series

D. C. HEATH AND CO., PUBLISHERS

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PREFACE

THE response which *Essays for College English* has brought from our own students at Iowa State College as well as from students and teachers of other institutions has seemed ample justification for its publication. The present volume is an attempt to satisfy the need for a book which may be alternated from year to year with the first series of essays.

The present volume — in common with the preceding one — aims to introduce the student to the more fundamental and far-reaching movements of thought of our times. It attempts to set him thinking seriously upon problems which he faces while a student, and which he will later be expected to help solve as an active member of society. By thus enlarging his outlook, it is hoped that the matter here presented may be of service by helping the student make wise use of his time in the face of the large future that awaits him.

The first group of essays presents the various activities of the Country Life Movement in order that the student may be led to consider what values should be achieved in individual and social life in the country. The next group discusses the place of Science in human life so that the reader may learn its values as well as its limitations. The third champions the various movements in Education, and points out the shortcomings of our present colleges. This group should help the student to formulate his college ideals and to broaden his intellectual outlook. The fourth group treats of the Personal Problems of the individual, so that the student may take some thought to improve himself as a man. The final group presents the various aspects of Peace and War. Essays from opposite points of view are included for the purpose of exercising the student's judgment and toleration, and of stimu-

lating him to the oral and written discussion of his mental reactions.

The book may be employed in a variety of ways. The Introduction makes it possible to use it in the so-called Thought Course. While the editor himself believes in the value of careful analysis as a needed help in intellectual discipline, others may use the method that they approve. In whatever way these essays are studied, however, they will furnish food for serious thought.

AMES, IOWA,
April 1, 1918.

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SUMMARY OF THE SUBJECTS DISCUSSED IN THE ESSAYS

Problems of Country Life

The outlook for scientific agriculture, the influence of the city upon the country, rural organization, the country school the center of the rural community, the country church the center of the rural community, business coöperation the center of the rural community, rural finance, the rural woman, the rural environment, the influence of the out-of-doors upon American Letters.

Science

The growth of science, the scientific philosophy, the limitation of scientific materialism, the relation of science to the progress of civilization.

Education

The education in scientific agriculture, the effect of too great specialization, the education in general science, the education in the humanities, some faults in present-day education, the purpose of the college.

Personal Problems

Reading, writing, conversation, manners, recreation, society, responsibility, self-reliance.

War

America's love of peace, America at war for peace, America's coöperation with other nations for peace, the moral problem of peace.

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THIS opportunity is taken to express gratitude to those who have so kindly granted permission to reprint copyright material, — to the *Atlantic Monthly* for "The Drift to the Cities," by G. D. Dickerman, and "A Hopeful View of the Urban Problem," by Mark Jefferson; to the University of Chicago Press for "Psychic Causes of Rural Migration," by Ernest R. Groves, "The Work of Rural Organization," by Thomas Nixon Carver, "The Federal Farm-loan Act," by Robert J. Bulkley, and "The Problem of the Rural Woman," by Kate Waller Barrett; to the *Review of Reviews* for "City Comforts for Rural Teachers," by George E. Vincent; to the *Survey* and to the author for "Farm Coöperation for Business, Schools and Churches," by Warren H. Wilson; to the *Art World* for "Natura in Minimis Existat," by John Burroughs; to the *Yale Review* and to the author for "Back to Nature," by Henry Seidel Canby; to *The International Journal of Ethics* and to the author for "Progress," by John Dewey; to the Palmer Company for "The Place of Agriculture in Higher Education," by Liberty H. Bailey; to Doubleday, Page and Company for "Idols," by Charles Mills Gayley; to Charles Scribner's Sons and to the author for "What is College For," by Woodrow Wilson; to G. P. Putnam's Sons, to the Cambridge University Press, and to the author for "On Jargon," by Arthur Quiller-Couch; to the author for "On Responsibility," by John Grier Hibben; to the Century Company for "America's Love of Peace," by John Hay; and to Longmans, Green and Company for "The Moral Equivalent of War," by William James.

INTRODUCTION

THE ANALYSIS OF ESSAYS

THE study of books is the prescribed business of the college student. His instructors are constantly assigning chapters and essays in bewildering number. He has but limited time at his disposal; he is expected to assimilate the contents of each assignment. Often he blunders through half his college days with but a vague, general guess at what he reads. Not infrequently he finds that he is unable to keep pace with his studies, and is forced to give up his college course in despair.

What the college student needs at the very outset is a definite knowledge of how to study. Unless he is taught some adequate method of dealing with the material that he reads, he must, of necessity, waste much valuable time that might be turned to definite account. Unless he learns how to study effectively, he will find that he is constantly handicapped in advancing himself in learning.

This need is satisfactorily met by the careful analysis of essays. Sufficiently hard mental discipline is thus required to fix a definite method of study firmly in the student's mind. The student is set to master the thought of assigned essays. He is, at first, astonished to find that he is unable to read with any degree of certainty or accuracy. This should stimulate him to earnest effort, and gradually develop in him the ability to select the essential thought of whatever he reads. The result should help him immeasurably in his quest for knowledge.

Careful analysis will also have a marked reaction on the student's writing. He enters college with the conviction that most rules for composition are contained in some school-

master's rhetoric. As he comes to study carefully a number of essays, he discovers that back of every careful piece of writing is a careful piece of thinking. This fact reacts forcefully, and in time the student is ashamed to write a theme which has not first been thoughtfully planned.

In analyzing an essay, the most important problem is to grasp the one particular point that the author wishes to impress. If the reader understands this, he is at the very heart of the mystery; but if he misses it — regardless of how many other subordinate ideas he may grasp — he is merely groping about in uncertainty. The first question to ask, then, is, *What point is the author trying to make?*

In order to find it, the reader should know that the careful author hints at this point in his title. In the first few paragraphs he attempts to interest the reader in the point and to prepare him to take a sympathetic attitude toward it. As soon as he has done this, — and he seldom uses more than half a dozen paragraphs even in an essay of twenty or thirty pages, — he states the point as clearly and concisely as possible. In order that the reader may more easily find it, he places this statement at the beginning of a paragraph or in a short paragraph by itself. Having presented the point, he is in duty bound to impress its truth upon the reader. Where it is possible, he presents in chronological order the facts which will do this; otherwise, he leads the reader from what is generally known to be true about the point to what is not generally known. He is sure to arrange these facts in some logical order, so that when the reader recognizes what the order is, he can more easily hold the entire essay in mind. The author skillfully guides the reader, in passing from the discussion of one of these facts to the next, by the use of transitional sentences and brief summaries. Near the end of the essay he restates his point and quickly reiterates the main facts which he has used to impress its truth. In concluding the essay, he gives his final judgment regarding the point.

Once the reader has found the point of the essay and has discovered the main ideas by which its truth is impressed, he is ready to ask a second important question: *Does the author really make his point?* Many students take it for granted, once a thing gets itself into print, that it is necessarily true. Such an attitude bewilders the mind with a mass of undigested and conflicting statements. If the reader is ever to master knowledge, he must pause and question each new thought that is presented to him.

If the reader is to answer intelligently whether the writer has made his point, he will be obliged to make a series of tests. The first is to ascertain whether the author sticks to his point throughout his entire essay. Sometimes, it will be found, a careless writer aims at nothing in particular, and in this case he is sure to shoot wide of any particular mark. But if one finds that the author has the point in mind in his title and that he has arranged every idea, from the first paragraph to the last, so that it contributes to the point that he is trying to make, the reader may feel satisfied with the first test. He should then make a second test. After summarizing the main ideas which the author has used to impress his point, the reader should examine these separately to see that the author has shown each to be true. If he finds any idea the truth of which has not been established, he should discard it; he should then take the remaining facts and ask, if these are granted true, whether it necessarily follows that the main point is true. If he can answer these questions in the affirmative, he may be fairly certain that the author has not failed to make his point.

Then there is a third question that the student should ask concerning every essay that he reads: *Has the author made his point in the most effective manner?* Much slovenly thinking and writing grow out of the attitude that it matters not in what manner the author proceeds, so long as he makes his point. As well say that it matters not in what clothes a man attends a formal dinner party. Just as efficiency demands that a man

examine every detail of his business to see which contribute to his profits and which do not, so the careful student must test each idea to see whether it helps the author to impress the point of his essay.

To answer whether the writer has made his point in the most effective manner, the reader should inquire whether the main ideas could be arranged in a different order so as to be more logical or more forceful. He should also ask whether the most important ideas have been given the most emphatic places in the essay — the beginning and the end. He should further inquire whether each idea has been given space proportional to its importance. If an important idea is hidden away in an essay, like a needle in a haystack, and if an unimportant idea is given the space of ten paragraphs while an important idea receives but three, then the reader may rightfully doubt whether the author has been as effective as he should be. Finally, the reader should examine whether the author has expressed himself clearly and compactly, with skill and ease; whether he has used the right word in the right place; whether his phrases are felicitous; and whether he has so ordered his thought as to keep the reader mentally alert and interested. If a writer is to be judged really effective, he must be able to satisfy all these tests.

In analyzing essays, the student will find that the Thought Analysis, the Summary, and the Criticism are guides to careful work. In order to secure uniform results, the student should use the following definite rules:

THE THOUGHT ANALYSIS

1. Summarize the point of the entire essay in a single complex sentence.

The principal clause should contain the leading thought; the subordinate elements, the limiting thoughts. John Dewey's essay, "Progress,"¹ may be summarized as follows:

¹ See pages 242-253 of this book.

Now that the present international situation has awakened us from the delusion of the evolutionary philosophy, which teaches that mere change necessarily means automatic progress, we must come to the realization that the guarantee of progress depends upon the development of a deliberate, striving intelligence and foresight among men, which studies to construct social mechanisms that correspond to the specific needs of the race.

2. Summarize — using a single complete sentence for each — the main ideas which the author uses to enforce his point. Unless the student proceeds carefully, he will confuse these main ideas with subordinate material. An author usually does not employ more than five main ideas; often he limits himself to two or three. The main ideas of John Dewey's essay, "Progress," may be summarized as follows:

- I. In the epoch that is just closing we have confused rapidity of change with automatic progress.
- II. The guarantee of progress depends not on the existence of social change — which is but the possibility of progress — but on the direction which human beings deliberately give that change.
- III. The guarantee of progress will come through the discovery of the needs and capacities of collective human nature as we find it, and through the invention of social machinery which will set available powers operating for the satisfaction of those needs.

3. Summarize — using a single complete sentence for each — the subordinate thoughts which the author uses to enforce each of his main ideas. Main idea I of John Dewey's essay, "Progress," may be summarized as follows:

- A. The past century and a half of discoveries and inventions has made it easy to confuse the resulting mobility and freedom of society with progress.
- B. While the unsatisfactory economic and social conditions have ever been present to show that these mobile forces might be turned in two ways, their display has not been dramatic enough to force the lesson home.
- C. We have preferred to believe that the development of industry, commerce, and science had made war practically impossible.

4. Condense, whenever it is consistent with clearness, the author's statement of each idea.

5. Match the statement of coördinate ideas by parallel construction.

6. Relate the principal ideas to the subordinate by the use of connectives. The most common of these are "in that," "that is," "for," "because," "the following." The tendency to use "therefore," "accordingly," and "hence" will be found, upon careful analysis, to be due to the confusion of principal with subordinate ideas.

7. Use the following system of symbols to distinguish between coördinate and subordinate ideas:

I.

A.

I.

a.

i'.

a'.

8. Remember that every statement in the Thought Analysis must be in the form of a complete simple or complex sentence.

9. Beginners will often find it advantageous to summarize each individual paragraph of the essay in one complete sentence, and then to arrange these summarizing sentences into a thought analysis.¹

COMPLETE THOUGHT ANALYSIS OF JOHN DEWEY'S "PROGRESS"

The Point of the Essay

Now that the present international situation has awakened us from the delusion of the evolutionary philosophy, which teaches that mere change necessarily means automatic progress, we must come to the realization that the guarantee of progress depends upon the development of a deliberate, striving intelligence and foresight among men, which studies to construct social mechanisms that correspond to the specific needs of the race.

¹ For a complete explanation of this method see *Outlines and Summaries*, by Norman Foerster, New York, 1915.

The Thought Analysis Proper

- I. In the epoch that is just closing, we have confused rapidity of change with automatic progress, in that,
 - A. The past century and a half of discoveries and inventions has made it easy to confuse the resulting mobility and freedom of society with progress.
 - B. While the unsatisfactory economic and social conditions have ever been present to show that these mobile forces might be turned in two ways, their display has not been dramatic enough to force the lesson home.
 - C. We have preferred to believe that the development of industry, commerce, and science had made war practically impossible.
- II. The guarantee of progress depends not on the existence of social change—which is but the possibility of progress—but on the direction which human beings deliberately give that change, that is,
 - A. The understanding of the methods of physical science makes us able to command the possibility of progress in that it enables us to forecast desirable physical changes and to set about securing them.
 - B. The doctrine of evolution, since it has given a general sanction to the notion of an automatic and wholesale progress in human affairs, regardless of man's effort, has been the most vicious and demoralizing ethic in the whole history of the human race.
 - C. The direction given to change must come through intelligence rather than through sentiment and emotion, since,
 1. The fund of sentiments and emotions remains about constant through the ages.
 2. Since the social conditions which call out and direct the impulses and sentiments may be altered indefinitely, it is through the application of intelligence to these that the positive means of progress may best be brought about.
- III. The guarantee of progress will come through the discovery of the needs and capacities of collective human nature as we find it, and through the invention of social machinery which will set available powers operating for the satisfaction of those needs, that is,

- A. To bring this about, we shall first need to remove the following difficulties:
1. We shall need to get a sufficiently large number of persons to believe in the desirability and practicability of such a method.
 2. We shall need to change the present *laissez-faire* philosophy, which trusts the direction of human affairs to the mere accident of nature or providence, to the philosophy which believes in a contriving and constructive intelligence.
 3. We shall need to bring the hard and fast conservative to see that existing constitutions, institutions, and social arrangements demand improved social mechanisms.
- B. In order to make my meaning a little less vague, I have drawn from the present international situation the following illustrations:
1. Since our commercial system is based on international credit and our political system on national sovereignty, we need some constructive intelligence either to internationalize our antiquated political machinery or else make our commercial ideas and practices conform to our political.
 2. Since neutral nations in times of war have no adequate protection of their rights, we need some constructive intelligence to set machinery in motion by which they may make their claims effective.
 3. Since international socialism—if it could secure justice from an international organization more readily than from a purely national one—would make war an impossibility, we need some constructive intelligence to perfect for it a satisfactory organization.
- C. The guarantee of progress, from this point of view, is a retail job, in that,
1. So far as the needs coincide in the further interests of peace, there is need of an international commerce commission.
 2. There is need of an international tariff board.
 3. There is need of an international board for colonies.
 4. There is need of an international board for the supervision of those backward races which have not as yet been benevolently, or otherwise, assimilated by the economically advanced peoples.

THE SUMMARY

1. Condense the entire essay into a single paragraph. (Make the point of the essay the topic sentence.)
2. Take up the main ideas in the same order in which the author uses them.
3. Give each main idea space proportional to the author's treatment of it.
4. The summary should contain the author's thought and not the student's reaction toward the thought.
5. The sentences should be fitted together so that they read smoothly.

SUMMARY OF JOHN DEWEY'S "PROGRESS"

Now that we have been awakened from the delusion of the evolutionary philosophy, we must come to realize the need of developing a deliberate striving intelligence among men in order to give direction to the constant change in human society. For the past century and a half we have confused mere rapidity of change with progress. We now see that change may move in either of two directions. Our knowledge of the methods of physical science, however, gives us the possibility of progress; it enables us to forecast desirable physical changes, and to set about securing them. We now need to develop constructive intelligence in order to discover the needs and capacities of collective human nature, and to invent the social machinery which will satisfy those needs. But before we can do this we shall need to get a sufficiently large number of persons to believe in our method; we shall need to change the point of view of those who still cling to the *laissez-faire* philosophy; we shall need to bring the hard and fast conservatives to see the need of improved social mechanisms. The present international situation illustrates the possibility of applying constructive intelligence in order to secure conformity between our commercial and political systems; in order to make the claims of neutral nations effective; and in order to organize international socialism for peace. In so far as the further interests of peace correspond with the interests of progress, there is need for an international commerce commission; an international tariff board; an international board for colonies; and one for the supervision of those backward races which have not yet been assimilated by the economically advanced peoples. In the perfection of such social mechanisms corresponding to specific needs lies the guarantee of progress.

THE CRITICISM

1. The criticism should answer the following questions:

I. Has the author made his point?

A. Has he made every idea in the essay contribute to the point?

B. Has he made a sufficient number of ideas contribute to the point to make it necessarily true?

II. Has the author made his point in the most effective manner?

A. Has he presented his ideas in such an order that the most important ones are given the most important places?

B. Has he given each idea space proportional to its importance?

C. Has he expressed himself clearly, compactly, and felicitously?

2. The criticism should be so written that it makes its point and makes it in the most effective manner.

3. The criticism should contain the student's point of view toward the essay. It should be based, not upon narrow prejudice, but upon careful analysis of the thought.

4. Frequently the students should write criticisms of one another's long themes.

UNIV. OF
CALIFORNIA

ESSAYS FOR COLLEGE ENGLISH

THE FUTURE OF AMERICAN AGRICULTURE¹

JAMES WILSON

THE mighty production of the farm for one third of a century has come out of an agriculture having many faults. In a large degree there has been one-crop farming; crop rotation, as practiced, has often been too short and unwise; the grasses and leguminous forage crops have been neglected, domestic animals have not sufficiently entered into the farm economy, and many dairy cows have been kept at a loss. The fertilizers made on the farm have been regarded as a nuisance in some regions; they have been wasted or misapplied by many farmers; humus has not been plowed into the ground as generally as it should have been; and in many places the unprotected soil has been washed into the streams.

This, in few words, is the historic story of agriculture in a new country; yet the course of agriculture in this country, bad as it may seem in its unscientific aspect, has had large economic justification. While pioneers, poor and in debt, are establishing themselves they have no capital, even if they have the knowledge with which to carry on agriculture to the satisfaction of the critic. They must have buildings, machinery, and live stock, even at the expense of the soil.

Millions upon millions of acres of fresh land have been coming into production faster than domestic consumption has required,

¹ Reprinted from the report of the Secretary of Agriculture for the year 1906.

and, at times, beyond the takings of importing countries. For many years the farmer was threatened with forty-cent wheat, twenty-cent corn, and five-cent cotton, and at times he was face to face with the hard conditions implied in these destructive prices. A more scientific agriculture would have raised wheat that no one wanted to eat, corn to store on the farm and perhaps eventually to be used for fuel, and cotton not worth the picking.

So it has happened, with reason, that the production per acre has been low; but there is no likelihood that low production is fixed and that the farmer must continue his extensive system. When consumption demands and when prices sustain, the farmer will respond. The doors of knowledge and example are opening wider to him.

There is abundant information concerning crop rotation, the dependence of high production upon the domestic animals, concerning grasses, clover, and alfalfa, and concerning the mixing of vegetable matter with the soil. Systems of farm management and soil treatment have assumed greater importance in their effect upon production; and there is the breeding of plants, which can multiply production so as to glut the market.

If there were need to do so, the cotton farmer and planter could double the present crop of two fifths of a bale per acre, and the feat would need nothing more than demonstrated and well-understood principles of farm management. It would be no work of magic to multiply the production of cotton per acre by three to get a bale and a quarter; and, besides this, the planter has more than three times the present actual acreage in cotton readily available and awaiting his use. More than the present area of cotton can thus be grown in a three-year crop rotation when the needs of the world demand it.

In accordance with principles demonstrated, known, and applicable, hints of which have been given, the corn crop per acre can be increased by one half within a quarter of a century,

and without any pretense that the limit has been reached. No wizard's services are needed for this, but just education.

The same statement is applicable to wheat. There is no sensible reason why half as much more wheat may not be had from an acre within less than a generation of time. It is only a question of knowledge, of education, of cultural system, and of farm management, all of which learning is and will be at the service of the farmer as he needs it.

Equally feasible is a 50 per cent increase in the crops per acre of oats, barley, rye, and buckwheat. Potatoes, instead of growing less than one hundred bushels per acre, should double their production. Wherever only six hundred to eight hundred pounds of tobacco are got from an acre, three fourths of a ton is the prospect.

Fruits, berries, and vegetables have a future too large to estimate. The cannery and the railway fast freight and refrigerator car have overcome obstacles of latitude, of longitude, and of season, and there is every indication that the farmer can supply any possible demand for these foods at home or abroad.

Farmers will learn how to feed more prolific breeds and strains of swine than the ones which they are now chiefly raising, and thus will pork and its products be increased per individual of the permanent stock of hogs. One fourth of the dairy cows of the country do not pay for their feed, and more than half of them do not return any profit; in proportion as the dairyman weighs the milk of each cow and applies the Babcock test will he increase the supply of milk, butter, and cheese. It is merely a matter of education.

Poultry is one of the steady and helpful sources of farm income. Movements are already on foot which may be expected to increase the egg production per hen by at least a dozen per year within a generation; and there are poultrymen, who are not enthusiasts, who foretell double that increase. If the hens of this year had each laid a dozen eggs more than

they did, the increased value of this product would have been possibly fifty million dollars.

The farmer will not fail the nation if the nation does not fail the farmer. He will need education to know the powers of the soil which are now hidden from him. The prospective yearly expenditure of ten million dollars for educational and research work by nation and states, with such increases as may come from time to time, must have enormous effects. There may be agricultural schools for the small children and agricultural high schools for the larger ones, and their education will be continued in the colleges.

The work of the Department of Agriculture has already had results which are valued at hundreds of millions of dollars annually, and yet the department feels that it has barely crossed the threshold of its mission of discovery and education. Co-operating to the same end are sixty experiment stations in fifty-one states and territories, the sixty-three agricultural colleges, thousands of farmers' institute meetings yearly, many excellent agricultural periodical publications, and new instructive books. Then there is a new line of work which is so productive of results that it is constantly extending, and that is the demonstration farm, — the encouragement of individual farmers to change their agriculture so as to multiply their yields and their profits and thus afford object lessons to other farmers.

Thus it appears that forces are now at work which will very considerably increase the production of the farms within a generation, and which promise to continue the increase indefinitely. He who would write the last chapter of the progress of the agriculture of this country must await the procession of the centuries.

The farmer is financially in a position now to do what he could not have done previous to the recent years of his prosperity. National welfare has been promoted by few revolutions in agricultural economics to the extent that it has been and will be promoted by ten-cent cotton. The greater part of the cotton

planters are out of their former bondage to future maintenance, and they are paying no enormous rates of interest for advancements, — rates which were estimated fifteen years ago to average 40 per cent a year.

In the Middle West the prosperity of the farmers during the last half dozen years and more has advanced in such mass and with such speed that no parallel can be found in the economic history of agriculture. One of the great changes that have come over this region is the conversion of a million agricultural debtors, paying high rates of interest and finding great difficulty in procuring the wherewithal out of prices much too low, into financially independent farmers, debt free and begging the banks to receive their savings at as small a rate of interest as 2 per cent.

Farmers are using their new capital to abolish the waste places of the land. The river is leveed and alluvial bottoms subject to overflow become worth hundreds of dollars per acre for vegetables; a marsh is drained by ditches and tiles, and celery makes it the most valuable land in the country; semi-arid land is constantly cultivated so as to make a mulch of finely pulverized earth on the surface, and the crops that it will grow make the farmer prosperous; durum wheat or alfalfa is introduced and again the semi-arid wastes are made to do the will of the cultivator; leguminous plants give humus and nitrogen to the sandy waste, to the use and profit of the farmer; the unused rocky, stony field or mountain side, offensive to both the economic and the æsthetic eye, blossoms with the apple, the peach, the pear, and the plum, and adds to the evidences that every square foot of the land may be made productive unless it is arid; and even then irrigation works, as far as water is available, swell the evidence. Along all of these lines of production farmers are using their newly acquired capital and are progressing as never before in their prosperity.

Formerly there was an abundance of farm labor and a dearth of farming capital; now these conditions are reversed, and labor

is scarce and capital abundant. Notwithstanding the farmers' inability to do some things for want of labor, the new situation is a great improvement upon the old one. The farmer can now employ every labor-saving device and thus reduce both the labor and the cost of production; he can raise his land to a higher state of fertility than can be made by chemical fertilizers alone, because he can advance the needed capital for permanent soil improvement and is in a position to await results; he can produce things that require years for the first crop, as in the case of fruits; he can provide such capital as is needed to distribute his products, and thus coöperation is open to him to a greater extent than ever before; he can secure a better education for his children to the end, among other things, that they may do better with the old farm than he did.

THE DRIFT TO THE CITIES¹

G. S. DICKERMAN

It is safe to take into consideration our losses as well as our gains. The thirteenth census tells of a decade of growth in the United States. In 1900 the population was less than seventy-six millions; in 1910 it is nearly ninety-two millions, an increase of about sixteen millions. In the list of 225 cities having over 25,000 inhabitants, all but three show an increase of population, and among the 1172 smaller cities having over 2500 inhabitants, the story is much the same. Among the forty-eight states there is only one, Iowa, which does not rejoice in an increase.

But some communities have not grown. In Massachusetts, with 25 large cities and 172 smaller ones and with an increase amounting to 20 per cent, there is Barnstable County that has been steadily declining for half a century, having had a population in 1860 of about 36,000, while now it has but 27,000. In Maine, there has been a good increase, especially in some of the cities; but Waldo County on the Penobscot once had a population of over 47,000, while now it numbers less than half of that; and Lincoln County, which had a population in 1860 of nearly 28,000, now has but little over 18,000.

The most surprising lapses, however, are in the great states of the Mississippi Valley, whose prosperity has been almost proverbial. In Missouri, with such growing centers as St. Louis and Kansas City, which together show an increase of 196,000, we find 71 counties out of 100 in which the population has declined, with an aggregate loss of 132,000; and with an increase in urban territory of 255,000 there has been a decrease in the

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rural parts of 68,000. Iowa has 71 counties out of 99 which have lost an aggregate of 108,000; yet most of her 77 cities have gained, and the increase in urban territory is about 113,000 while the decrease in the rural parts is 120,000. Indiana has 57 counties out of 92 which have lost; her urban territory has gained 267,000, but there has been a falling off in the rural parts of 83,000. Illinois has 50 counties out of her 97 which show a loss; in her urban territory the increase has reached the enormous number of 810,000, but the gain in the rural territory has been only 6,455. Wisconsin, adjacent to Illinois and Iowa, makes a little better showing, yet 21 counties have lost in this state over against 50 which have made a gain; the population in her urban territory has grown 193,000, while that in the rural has increased by 71,594.

Not to pursue this record of particular states any further, it is enough to say that among the 2941 counties in all the states, we find 798 in which the population was less in 1910 than it had been ten years before. If we compare with this the record of the previous decade, we find that between 1890 and 1900 there were 378 counties in which there was a decline; and going back to the tenth census we find that between 1870 and 1880 the number was little over a hundred. This is interesting in connection with the fact that the increase of population in urban territory throughout the country in this decade was over eleven million and in the rural less than five million. It all points to a widespread movement from the farm to the town and the metropolis.

It was to be expected that a decline would appear in the products of the farm. The following are examples of this. The corn crop of 1910 was less than that of ten years before by 114,000,000 bushels. The wheat crop was greater on account of the better yield, but the number of acres on which it was grown was less by over 8,000,000. The apple crop was smaller by 27,876,000 bushels, and fewer small fruits were grown by 36,653,000 quarts.

The right way of estimating a country's products, however, is in their proportion to the number of people. As our population has increased about sixteen million, the amount needs to be much greater to afford each individual an equal quantity for maintenance. The fair way of reckoning, then, is by the amount produced for every thousand inhabitants. Proceeding thus, we find that in 1910 for every thousand inhabitants wheat was grown on 212 fewer acres than in 1900, with a product of 1236 fewer bushels, but with a valuation greater by \$2283; 30.6 per cent less land, 14.3 per cent less production, but 46.9 per cent greater value. Corn was grown on 178 fewer acres for every thousand inhabitants, with a product of 7337 bushels less, but with a value \$4743 greater; 14.7 per cent less land, 20.9 per cent less product, 43.5 per cent greater value. Taking all cereals together, for every thousand inhabitants, the acreage in 1910 was 341 less, the product 9310 fewer bushels, but with a value \$9460 greater than in 1900; 14 per cent less land, 16 per cent less product, 48.9 per cent greater value. For orchard fruits, including apples, pears, peaches, oranges, and the like, the number of trees of bearing age, for every thousand inhabitants, in 1910 as compared with 1900, was 1586 less, the product 446 bushels less, the value \$430 more; 32.6 per cent fewer trees, 16.1 per cent less fruit, 39 per cent greater value. For all crops, for every thousand inhabitants, the acreage in 1910 was less than in 1900 by 342 acres, while the value of the product was estimated to be \$20,202 greater; 9.18 per cent less land under cultivation and a product costing 51.2 per cent more.

With such a decrease in crops, particularly those required for feeding animals, it was inevitable that there should be a falling off in the amount of live stock on farms. The census enumeration tells us that in this decade the number of neat cattle decreased 5,916,000; of swine 4,682,000; of sheep, 9,056,000. The proportions to population are as follows: For every thousand inhabitants the number of cattle on farms decreased

219, while their value increased \$2.38 per head; the number of swine decreased 195, and their value increased \$3.17 per head; the number of sheep decreased 238, and their value increased \$1.67 per head.

It is argued in explanation that the enumeration for the census of 1900 was made on June 1, while that of 1910 was on April 15, in the midst of the bearing season, when the numbers would naturally be lower than at the end of that season. But we do not find any such decrease in the number of horses, mules, or goats; rather a large increase. Again, it is said that the passing away of the great cattle-ranges of the western plains is the cause of the decrease. But this does not explain why a dozen of the older Northern states show, every one, a falling off in the number of cattle on their farms, amounting in all to nearly two million head, with a corresponding decrease in their number of swine and sheep. The plainer explanation is the decline of rural population in so many counties and the decrease in those products of the farm which are necessary to the feeding of these animals.

So the rising prices of beef, pork, and mutton are directly traceable to the decline of our rural population. It is the same, of course, with the rising prices of cereals, fruits, and all the other products of the farm. This touches other people besides those within the boundaries of the United States. Heretofore large quantities of breadstuffs, meats, and fruit have been exported to other countries and have borne an important part in their sustenance. Of necessity there is a decrease in these exports. Higher prices must then follow in all the countries with which we have commercial relations, and wherever there is want of food we may expect the want to be aggravated. This is involved in our world-wide relationships at the present time.

There is a more serious consequence, however, than scarcity of food; it is lowering of character. Governor Eberhart of Minnesota tells of a visit he made to Minneapolis in a harvest

emergency, for laborers to gather wheat.¹ The farmers were at their wits' ends to save their crops. It was said that the city was full of the unemployed who were looking everywhere for jobs. He found them, as he says, "seated on the park benches in all sections of the city and overflowing to the curb stones. Work, it seemed, could not be found. Some of the men were on the verge of starvation, and the charitable organizations of the city were taxed to their utmost capacity to provide for them." It looked as if his task would be an easy one and he could take back as many men as he wished. He picked out his men and told them he wanted their help. They were eager for the chance and said they could do anything. He spoke of the service he had in mind in the country and on the farms, when instantly their faces fell and they were as glum as they had been before. Their answer was: "We don't want to go to the country, boss. We don't want to live on a farm. There's nothin' for us there, — no life, no entertainment, no lights, — nothin' but monotony and work. We'd rather stay in the city and starve than go to the country an' have nothin' to do but work. No, sir, we stay right here." And stay they did. He couldn't get one of them to go with him, and the farmers had to harvest their wheat as best they could while the city held in its grasp, unemployed, enough men to garner all the crops of the state.

We cannot suppose that Minneapolis was any worse than other cities in this particular. It is likely that a proposal of this sort would have been received by the unemployed in any one of a thousand American cities in much the same way. And that is the worst of it, for it means an essentially wrong attitude of mind in multitudes of people. Willingness to lie idle rather than to undertake anything they do not quite like, to hang on charity rather than to go where they are wanted and can be of use, with callous incapacity for hearing any call of duty or feeling

¹ "What I am Trying to Do." By Adolph O. Eberhart. *The World's Work*, April, 1913, p. 671.

any thrill of interest at a summons for help in an hour of somebody's crying necessity. That is the kind of men that our cities make, or too many such.

People flock to the cities for the advantages there offered, and find disadvantages. Parents sell their wholesome country homes because of their children, and go where there are grand churches, superior schools, and attractive libraries, to find themselves in close proximity to drinking saloons, dance halls, gambling dens, and indescribable allurements to vice. Is that better for their boys and girls, or is the new atmosphere heavy with influences that are a peril? There are fifty churches in a city and a thousand saloons. The churches are open one day and two or three evenings in each week. The saloons are open every week-day all day long and far into the night. Boys and young men are not attracted to the churches. The saloons hold out all sorts of attractions to beguile them within their doors. What wonder that so many city boys grow up with disordered appetites and depraved tastes! A gentleman was recently heard to say, "As I go along the street the sight of cigars in the store windows makes me want to smoke and I step in and buy when otherwise I should not think of it." This gentleman is an eminent scholar, a principal of a boys' school, an advocate of reforms, and influential in church and society. If the temptation of the store windows was too much for him, can we expect his pupils to be proof against it?

Do we understand the extent to which these artificial appetites are being cultivated and what this means? With a lessening of the food supply there comes a more constant resort to stimulants and narcotics. The hungry go for solace to drink and tobacco, sometimes to more powerful drugs. We can easily imagine that those loungers whom Governor Eberhart saw in the parks of Minneapolis were, most of them, habituated to these indulgences. But these practices grow in prevalence among all classes of people. They are not so common in the country, but are most rife in all our centers of population. And

abundant provision is made for them. The prices of flour and meat may advance, but somehow the cost of whiskey and tobacco is kept within the reach of even the very poor. Cigarettes to-day do not cost more than half what they did ten years ago, and three or four times as many of them are used.¹

Some products of the farm have not decreased during this decade. Barley, which goes largely to breweries and distilleries, was grown on 3,228,000 more acres in 1910 than in 1900, the product was greater by 53,709,000 bushels, and the valuation by \$50,826,000. Tobacco was grown on 193,451 acres more, its product was greater by 187,652,000 products, and its valuation by \$47,315,000. We find too that while exports of bread-stuffs and meats have declined, it has not been so with tobacco; on the contrary, the export of leaf tobacco increased within the ten years including 1912 some 79,000,000 pounds.

Our Internal Revenue receipts offer a measure of the amount of these products. The taxes derived from distilled and malt liquors and from tobacco, as reported by the United States Commissioner, in 1912 amounted to \$290,250,000. This was considerably more than the entire congressional appropriations for the army and navy; and in sixteen months these taxes pour into the treasury more than the estimated cost of the Panama Canal. These taxes have nearly doubled within twenty years, indicating how rapidly these habits of cultivating and indulging artificial appetites have been spreading throughout our country.

In a highly organized community there is a possibility that children will grow up to be like the parts of a machine, fitting snugly into their little places and moving there with hardly a thought of what their life means; making of custom a slavery; bowing in craven fealty to a boss, to a business, a sect, an order,

¹ The number of cigarettes on which revenue tax was paid for the year ending June 30, 1906, was 3,793,359,903; for the half-year ending December 31, 1912, it was 7,121,012,610, equivalent to over fourteen billion a year. This is the increase in seven years.

a party, any sort of fashionable convention, with never a sentiment of devotion to any burning truth or any grand cause, and with scarcely any recognition of those responsibilities which give to life its dignity and splendor. Many great human qualities come to their best in a life of comparative isolation. A big tree, an oak or elm, standing out in an open field, has a toughness of fiber, a spread of boughs, and roundness of shape that are never seen in a tree that stands in the woods. So people get individuality by being much alone. They become self-reliant by relying on themselves. They gain clear opinions by thinking things over, and thinking them out to their necessary conclusions. They acquire inflexibility of purpose by facing obstacles and conquering them. The pioneers of our country and the fathers of the republic were such men. The projectors of great undertakings carried through triumphantly have acquired their power in this way. The country is the natural nursery of such qualities. People are wanted on the farms to raise corn and grow stock for the markets; but they are wanted there far more for the training of manhood and womanhood in moral worth, in religious sensibility, in all the traits of a strong, upright personality. In the future as never heretofore, our cities, with their multiplying wealth and lavish luxury, are likely to need the country for that steady renewal of their better life which shall keep them from relaxing into sensuality and sinking into decay.

A HOPEFUL VIEW OF THE URBAN PROBLEM¹

MARK JEFFERSON

ONE has heard so much of late years about the exodus from the country, in the United States, that it is time some one pointed out that no such exodus has taken place. Individuals leave some country places for the city or for other country places, but generally speaking the country is gaining inhabitants at a fairly rapid rate. These are not figures of speech, but rather figures from the Census. The Census defines country places now as all those with less than 2500 people in a single settlement, and states that there were in 1910 over four million more people in them than in 1900. If one cares to look further back, in the last thirty years the country people have increased by more than fourteen millions. As to rate of increase, our country dwellers have increased in the last decade by eleven per cent. The whole German Empire, cities and all, has only increased by thirteen. The American exodus from the country is one of the three great myths of the nineteenth century!

There are counties in which country people are diminishing. There are even ten states out of our forty-eight which show losses of country people. These are Missouri, Iowa, Illinois, Indiana, Ohio, New York, Connecticut, Rhode Island, New Hampshire, and Vermont. Their losses in the decade were 469,702. But the gains of the other thirty-eight states were so great that the whole country had 4,963,959 more country people in 1910 than in 1900. These figures are taken from a recent bulletin of the Thirteenth Census entitled "Population

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of Cities." It divides the United States into nine districts, in two of which the country had losses: 5150 in New England, and 4220 in the East North Central States. The other seven gained: the Mid-Atlantic 445,558, the West North Central 439,446, South Atlantic 996,979, East South Central 474,205, West South Central, 1,456,524, the Mountain States 586,681, and the Pacific States 573,930.

Men and families have been lost to the country, but for one that has gone nine have come. Our population is a shifting one; many of those whom we see leaving one country district have merely gone to swell the country dwellers elsewhere. The facts observed are not those habitually stated.

What is really happening is an extraordinary upspringing and growth of cities. We had 1894 cities in 1900. In 1910 these had become 2405, and their inhabitants had increased from thirty-one and a half to forty-two and a half millions, a gain of thirty-five per cent. If we look back thirty years instead of ten we shall see 1102 cities become 2405 and a population of 14,772,438 grow to 42,623,383. This is the spark of fire behind so much smoke. Rural population is growing fairly well, but cities are growing by leaps and bounds. Not an exodus from the country but the development of cities has been the phenomenon of the generation.

Now, this thing that has been happening is natural and normal in a nation taking possession of a land. We should not fail to note that the number of cities has grown as well as their population. Not merely are they three times as populous at the end of the decade as at the beginning, but over twice as numerous. The public mind has thought of the cities as if they had always been there, over against the country and independent of it; as if in matters concerning the growth of population everything were possible, — that the cities might have grown slower than the country, or that it was in some way to be expected that town and country should normally grow alike. As a matter of fact,

• cities are the outcome of the growth of country population;

are an outgrowth of the needs of the country people, first for exchange and distribution of products, second for some working over and manufacturing of those products; and they must grow faster than the country population that creates them, from the conditions of modern life and industry.

Thirty years ago, more than half our cities did not exist. The new ones number no less than 1303. These have not been "gone to" by people from the country, but have just grown on their sites out of rural communities. Of course, part of the number is fictitious. With the discrimination between rural and urban communities at 2500, a "country" community of 2490 becomes a "city" on adding ten new inhabitants without any change of character. But the total increase in number of cities of from 2500 inhabitants to 5000 is only 563. Not all of these can have just grown over the limiting size as suggested, and they leave over 700 to be accounted for as new.

With us, cities are as sure to spring up with the increase of country population as the forests are to disappear. City and country are organically related. Crops cannot be grown without fields, nor exchanged and manufactured under the modern system of division of labor without cities. Only in the rudest pioneer settlements do men dispense with this division of labor by doing everything painfully and badly on the farm. Such settlements are retarded and hampered until they have towns for the city part of the work. When we estimate that the average inhabitant of New York may have but a few score square feet for his own use, we are apt to forget that he can only exist on them because somewhere in the country there are acres of ground producing for him, as really and definitely for him as if he owned them and hired the labor on them, — what Professor Penck has called his "sustenance space."

In this connection it is remarkable that twenty of the twenty-two cities which have doubled in population in the last ten years are in the South and West; and that only one of these,

Los Angeles, had 100,000 in 1900. Almost all of them, therefore, are small new growths in the agricultural parts of the country. The two northern cities are Schenectady, New York, and Flint, Michigan. Flint owes its overgrowth to the same automobile boom that has lifted Lansing and Detroit also out of their former class.

Where the author lives, in southern Michigan, the farms of from forty to eighty acres have their houses strung along the highways at considerable distances. At road corners every few miles we may find a little cluster of them by a church or a schoolhouse, and especially by a country corner-store. This is important in the life of the whole district for its social opportunities, but it lives on its usefulness as a point of local supply and collection. Here eggs and butter are brought from all the farms around. Every one obtains here his flour, sugar, tea, coffee, kerosene, lamps, common plates, rough cloth and clothing, hammers and nails — the things that some one within a few miles is certain to want every day. At longer intervals one comes on villages with better goods in larger assortments; things not so constantly needed; so that a wider *clientèle* must be appealed to for their sale. In the same way every county has its little city, with banks and higher schools and theaters and factories, and stores with costlier grades of furniture and clothing and objects of luxury. Here or in the village will be sold the farmer's crop. To them he will look for the culture he wants in the form of religion, of education for his family, or of social intercourse and entertainment. Here he and his wife hope to spend their last days, with the farm rented or worked by some one on halves. Each of these grades of communities has been created by the settling of the region. Each has grown as more forest was cut away; villages have grown into little cities; little cities have grown into large ones in which manufacturing becomes more and more important with size, for only in the large ones are assured ease of movement of raw and manufactured material and a constant supply of labor of

varied training and capacity. The few really strategic points in the whole country, for interchange of commodities, will foster the growth of a few cities to overwhelming size. But all of these cities alike have their roots in the country fields. If the country folk ever really take it into their heads to flock to the cities, no city can either last or grow.

In 1870, Michigan and Wisconsin together had but ten cities of ten thousand or more. In 1910 they had forty-one. In 1870 the only city of a hundred thousand inhabitants between Buffalo and the Mississippi was Chicago, then about as large as Cincinnati is to-day. Now there are five of them, and six more of over fifty thousand. In the better settled part of the region the cities were then a matter of a hundred miles apart, now they are barely twenty-five. These two states have nine hundred thousand more country people than they had thirty years ago. Their cities have increased by a million and a third in the same time, but it is the country increase that has made this possible. The total natural increase of the country population cannot remain on the farms without entailing a rapid subdivision of the farms.

Now, American farms are going to be smaller, but it will happen by the introduction of intensive methods of agriculture or by the taking up of the farms by Europeans who understand those methods. There are signs enough that the thing is happening already, but it is a slow process compared with the increase of the population. It is the nature of the case that the man in the field can raise the raw produce for seven or eight. That is about what he was doing in this country in 1900, and he will produce for more and more with every year. Between 1855 and 1894 the introduction of seven different machines used in raising and harvesting corn reduced the man-labor in a bushel of corn from four hours and thirty-four minutes to forty-one minutes. For a bushel of wheat the similar reduction has been from three hours and three minutes to ten minutes. To get the same produce from the ground, one man in the field

suffices where then sixteen were needed. Of course such an application of machinery is ideal, and not attained in wide practice. The essential farm population must always be thin, and if it becomes too dense, economic forces tend to thin it at once. But the operations connected with the manufacture and interchange of commodities need not be kept near the fields. On the contrary, they can best be carried on under the conditions of village and city life, at points well placed for power and transportation.

City population normally adds a portion of the natural increase of the population of the country to its own increase: it must grow faster than the country population does.

The modern census figures of many lands teach us that extensive farming of the American type exists with population densities of from 25 to 125 to the square mile. That figure includes the cities that are sure to complement such farms. The actual country population in our great farming states is but 31 in a *total* population density for the same region of 43. The European intensive style of farming, which puts more labor, more fertilizer, and more knowledge into smaller fields, and gets much larger crops from them, goes with populations of from 125 to 250 to the mile. Densities above 250 imply that manufacturing of raw materials from outside fields of supply is beginning to prevail; densities under 125 that the land is not completely farmed, but has portions in forest, or used for grazing, or too dry for any agricultural use, as in many of our western states. These occupational densities cannot be separated by sharply drawn lines, but if they are taken for wide enough areas they are really decisive. More than the average density for the occupation is overgrowth, and has to be compensated for by some special advantage or it causes distress. Any overgrowth in the country is at once drawn to the city by the varied possibilities for occupation there, aided by the attractiveness of the city life that is always operative on the country, even on those profitably busied there.

To the density of city population there is hardly any limit. Some wards in New York are settled at the rate of five hundred thousand people to the mile; all Manhattan Island averages about a hundred thousand, but this is, of course, mere "home space."

There are many difficulties in drawing distinctions between city and country, as we must for statistical purposes. I have tried to lay emphasis above rather on their interrelation and essential unity, yet the line must be drawn somewhere. It was General Francis A. Walker, Director of the Census in 1870, who suggested 8000 as a critical size, all communities with fewer inhabitants than that being defined as "rural." The Twelfth Census reduced this number to 4000, the Thirteenth to 2500. What has been the effect of this change of standard on computations of country growth? Apparently to make country population *seem* to grow more slowly by about a fifth of its total amount. The Census gives us the total populations for cities of 100,000, for those of 25,000, of 10,000, of 5000, and of 2500. If we make the experiment of regarding each of these sizes in succession as a limiting size between country and city, we shall get for the country growth of the last decade the successive estimates, 16, 13, 11½, 10, and 9 per cent; smaller values as you set the city limit further down. For this example I have taken no account of the passing of "rural" communities into the "urban" class during the decade. With this allowance — that is, counting the increase of population during the decade of *the area that was rural in 1910*, whether it stayed so or not — our nine goes up to eleven.

If the "city" minimum were set a little lower, the case might be made to look worse yet for the country.

The reductions in the limit to 4000 and 2500 appear to have been made with the eyes rather on the *rus* than on the *urbs*. Is a place of 2500 really a city? The dweller in one of 100,000 will hardly think so. Form of government is, of course, not a satisfactory means of distinguishing; but surely there is some

common element in the usual notion of *city*, *cityfied*, and *urban* that can be used in defining. I think the words carry for all of us the idea of paved streets, compactly and continuously closed in by permanent buildings several stories high and pretty crowded with people. Public parks do not interrupt the city concept at all, nor do waterways which are used for traffic. The community at the mouth of the Charles is really one city, although governed by several mayors and councils.

Rural population lives in isolated houses. Such is the country population that I find widespread about here with a density of 31 to the square mile; but between this rural life and city life is another type, that of the village or small city. Village life is marked by a drawing together of homes; that is its distinction from the true country. Perhaps the greatest hardship of country life is the lonesomeness, above all for the women. The village is built up by this country longing for society, and the village appears therefore as soon as two houses stand side by side. When they are so clustered and grouped that they have no farms annexed, it is plain that the village has arrived. The space occupied is an essential part of the idea. Not how many are the people, but how near together do they live? The Michigan General Laws are suggestive when they authorize the incorporation as a village of any community that has at least 300 people on at least one square mile of ground.

The city appears in the growth of the village when the increasing material nearness of men brings about social repulsions. It is the delight of moving to the village that I may have neighbors; of going to the city that I need not know who my neighbors are. Material crowding of men has brought evils in its train against which the city must defend itself. To prevent vehicles from sticking in the mud of heavily traveled streets, the streets must be paved, and as further defenses we must now have city lighting, policing, sewerage, and water supply, all because there are now so many of us so near together.

The blessings of the village become curses with further growth,

unless "city" remedies are applied. The very crowding brings a thinning out at the center. In the heart of the great modern cities nobody lives but janitors and caretakers of stores and office buildings. While each of the twenty-odd square miles of Manhattan Island has more than a hundred thousand residents, the business center, in Wards Two and Three near the southern tip of the island, has less than seven thousand to the mile. The great example, of course, is London, with its old "City" steadily dwindling; but more than that, the central fifth of the whole County of London has fewer inhabitants with each decade, as shops and offices take the place of homes.

Country people live in isolated homes, village homes are neighborly, and the city defends its inmates from neighbors who may not be desired. The line cannot be sharply drawn between them; the best thing to use is the average from the facts of many large cities. We learn from that how people do live in large cities.

From studies of many large cities in Europe as well as in America, it appears that a reasonable lower limit of density of population for a city is ten thousand people to a square mile. This is not far from the official average for American great cities.¹ All areas continuously settled at the rate of over ten thousand to the mile are *cities*; all areas less densely settled, *villages*, until the houses come to be isolated, when we have reached the *country*. This throws Charlottenburg in with Berlin, Hoboken and Jersey City with New York, and makes Cambridge, Somerville, Chelsea, and Brookline essential parts of Boston, with a total population this year, 1913, of nine hundred thousand people.

Most of our cities contain city part, village part, and country part. So does Vienna, but most European cities have expanded beyond their limits and citified their suburbs. London has invaded several counties.

¹ *Bulletin of the American Geographical Society*, September, 1909: "Anthropography of Great Cities."

The land has been settled, population has been developed slowly in the country, as befits the sparse agricultural occupation of the land; in the cities, rapidly, at the demand and under the stimulus of country development. No exodus from the country has occurred except as the country, exuberant and life-giving, brings forth a population in excess of agricultural needs. This it is always doing, and with this surplus it creates the cities that supplement and crown the life of the land.

PSYCHIC CAUSES OF RURAL MIGRATION¹

ERNEST R. GROVES

IN modern civilization the increasing attractiveness of the city is one of the apparent social facts.² Social psychology may reasonably be expected to throw light upon the causes of this movement of population from rural to urban conditions of life. Striking illustrations of individual preference for city life, even in opposition to the person's economic interests, suggest that this problem of social behavior so characteristic of our time contains important mental factors.

Since sensations give the mind its raw material,³ the mind may be said to crave stimulation. "In the most general way of viewing the matter, beings that seem to us to possess minds show in their physical life what we may call a great and discriminating sensitiveness to what goes on at any present time in their environment."⁴ This interest of the mind in the receiving of stimulation for its own activity is an essential element in any social problem. The individual reacts socially "with a great and discriminating sensitiveness" to his environment, just as he reacts physically to his stimuli to conserve pleasure and avoid pain.

The fundamental sources of stimuli are, of course, common to all forms of social grouping, but one difference between rural and urban life expresses itself in the greater difficulty of obtaining under usual conditions certain definite stimulations from

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² Gillette, *Constructive Rural Sociology*, p. 42.

³ Parmelee, *The Science of Human Behavior*, p. 290.

⁴ Royce, *Outlines of Psychology*, p. 21.

the environment. This fact is assumed both by those who hold the popular belief that most great men are country-born and by those who accept the thesis of Ward that "fecundity in eminent persons seems then to be intimately connected with cities."¹ The city may be called an environment of greater quantitative stimulations than the country. The city furnishes forceful, varied, and artificial stimuli; the country affords an environment of stimuli in comparison less strong and more uniform. Minds that crave external, quantitative stimuli for pleasing experiences are naturally attracted by the city and repelled by the monotony of the country. On the other hand, those who find their supreme mental satisfactions in their interpretation or appreciation of the significant expression of the beauty and lawfulness of nature discover what may be called an environment of qualitative stimulations. The city appeals, therefore, to those who with passive attitude need quantitative, external experiences; the country is a splendid opportunity for those who are fitted to create their mental satisfactions from the active working over of stimuli that appear commonplace to the uninterpreting mind. If Coney Island with its noise and manufactured stimulations is representative of the city, White's *Natural History of Selborne* is a characteristic product of the wealth of the country to the mind gifted with penetrating skill.

Doubtless this difference between rural and urban is nothing new, and from the beginning of civilization there have been the country-minded and the city-minded. In our modern life, however, there is much that increases the difference and much that stimulates the movement of the city-minded from the country. Present-day life with its complexity and its rapidity of change makes it difficult for one to get time to develop the active mind that makes appreciation possible. Our children precociously obtain adult experiences of quantitative character in an age of the automobile and moving pictures, and an unnatural craving is

¹ Ward, *Applied Sociology*, pp. 169-98.

created for an environment of excitement, a life reveling in noise and change. Business, eager for gain, exploits this demand for stimulation, and social contagion spreads the restlessness of our population. The urban possibilities for stimulation are advertised as never before in the country by the press with its city point of view, by summer visitors, and by the reports of the successes of the most fortunate of those who have removed to the cities. In an age restless and mobile, with family traditions less strong, and transportation exceedingly cheap and inviting, it is hardly strange that so many of the young people are eager to leave the country, which they pronounce dead — as it literally is to them — for the lively town or city. It is by no means true that this removal always means financial betterment or that such is its motive. It is very significant to find so many farmers who have made their wealth in the country, or who are living on their rents, moving to town to enjoy life. May it not be that a new condition has come about in our day by the possibility that there are more who exhaust their environment in the country before habit with its conservative tendency is able to hold them on the farm? One who knows the discontent of urban-minded people who have continued to live in the country can hardly doubt that habit has tended to conserve the rural population in a way that it does not now. And one must not forget the pressure of the discontent of these urban-minded country parents upon their children. The faculty of any agricultural college is familiar with the farmer's son who has been taught never to return to the farm after graduation from college. That the city-minded preacher and teacher add their contribution to rural restlessness is common thought.

In the city the sharp contrast between labor and recreation increases without doubt the appeal of the city to many. The factory system not only satisfies the gregarious instinct, it also gives an absolute break between the working time and the period of freedom. In so far as labor represents monotony, it emphasizes the value of the hours free from toil. This contrast is

often in the city the difference between very great monotony and excessive excitement after working hours. It has been pointed out often that city recreation shows the demand for great contrast between it and the fatigue of monotonous labor. So great a contrast between work and play — monotony and freedom — is not possible in the country environment. In the midst of country recreations there are likely to be suggestions of the preceding work or the work that is to follow. It is as if the city recreations were held in factories. Country places of play are usually in close contact with fields of labor. Often indeed the country town provides the worker with very little opportunity for recreation in any form. In rural places recreation cannot be had at stated periods. Weather or market conditions must have precedence over the holiday. Recreation therefore cannot be shared as a common experience to such an extent by country workers as is possible in the city. Since the rural population is very largely interested in the same farming problems, even conversation after the work of the day is less free from business concerns than is usually that of city people.

The difficulty of obtaining sharp contrast between work and play in the country no doubt is one reason for the ever-present danger of recourse to the sex instinct for stimulation. One source of excitement is always present ready to give temporary relief to the barren life of young people. Not only of the girl entering prostitution may it be said that with her the sex instinct is less likely "to be reduced in comparative urgency by the volume and abundance of other satisfactions."¹ The barrenness of country life to the girl growing into womanhood, hungry for amusement, is one large reason why the country furnishes so large a proportion of prostitutes to the city.

This civilizational factor of prostitution, the influence of luxury and excitement and refinement in attracting the girl of the people, as the flame attracts the moth, is indicated by the fact that it is the country dwellers who chiefly succumb to the fascination. The girls whose

¹ Flexner, *Prostitution in Europe*, p. 72.

adolescent explosive and orgiastic impulses, sometimes increased by a slight congenital lack of nervous balance, have been latent in the dull monotony of country life and heightened by the spectacle of luxury acting on the unrelieved drudgery of town life, find at last their complete gratification in the career of a prostitute.¹

Consideration to the part played in the rural exodus by the nature of the stimuli demanded by the individual for satisfaction or the hope of satisfaction in life suggests that the school is the most efficient instrument for rural betterment. The country environment contains sources of inexhaustible satisfaction for those who have the power to appreciate them. Farming cannot be monotonous to the trained agriculturalist. It is full of dramatic and stimulating interests. Toil is colored by investigation and experiment. The by-products of labor are constant and prized beyond measure by the student and lover of nature. Even the struggle with opposing forces lends zest to the educated farmer's work. This does not mean that such a farmer runs a poet's farm, as did Burns, with its inevitable financial failure, but rather that the farmer is a skilled workman with an understanding and interpreting mind. If the farming industry, under proper conditions, could offer no satisfaction to great human instincts, it would be strange indeed when one remembers the long period that man has spent in the agricultural stage of culture. City dwellers in their hunt for stimulation are likely to face either the breakdown of physical vitality or the blunting of their sensibilities. Country joys, on the other hand, cost less in the nervous capital expended to obtain them. The urban worker, in thinking of his hours of freedom in sharp contrast with the time spent at his machine, forgets his constant temptation to use most of his surplus income in the satisfying of an unnatural craving for stimulation created by the conditions of his environment. This need not be true of the rural laborer and usually is not.

It is useless to deny the important and wholesome part that

¹ Ellis, *Studies in the Psychology of Sex*, VI, 293.

the urban life and the city-minded man play in the great social complex which we call modern civilization, but he who would advance country welfare may wisely agitate for country schools fitted to adjust the majority of country children to their environment, that they may as adults live in the country successful and contented lives. We need never fear having too few of the urban-minded or the able exploiters of talent who require the city as their field of activity. The present tendency makes necessary the development of country schools able to change the apparent emptiness of rural environment and the excessive appeal of urban excitement into a clear recognition on the part of a greater number of country people of the satisfying joys of rural stimulations.

THE WORK OF RURAL ORGANIZATION¹

THOMAS NIXON CARVER

THE purpose of this paper is to point out the need that now exists for a better organization of rural interests and the difficulties that must be overcome before that need can be fully met.

One of those movements which thinking men of every generation have regretted is that which is known as the rural exodus. A little discrimination, however, will convince any one that such an exodus has its favorable as well as its unfavorable side. Agriculture is limited by space or superficial area. After an agricultural region has once become settled, with all the land in cultivation, and with enough labor employed on it to cultivate it somewhere beyond the point of diminishing returns, it must do one of three things: First, it may limit its birth-rate and keep the population stationary. France is an example. Secondly, it may increase the intensity of its cultivation, getting continually smaller products per man, though increasing the product per acre. Parts of Italy and Japan are examples. Thirdly, its surplus rural population may migrate either to new agricultural regions or to cities. Rural America is an example. Among these three possibilities, the last named probably has the fewest objections.

While a normal and healthy rural community will, in all probability, swarm, or send its surplus people elsewhere, it is always to be hoped that it will retain its fair share of ability and talent. Otherwise it must deteriorate as its stock deteriorates. It is the belief of many observers that our rural communities have not retained their fair share of talent, but have

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sent an undue share to build up the cities. This is the one aspect of the problem which should give us concern. It should be studied in a sensible way, and treated constructively. It cannot be said that this has been done with many of the proposals which have recently been made.

If we were distressed to find that water was flowing from one lake into another, we should not think it a very wise plan to try to pump some of it back into the upper lake. That would only accelerate the flow downward again. We should try rather to prevent the flow downward. For a long time many people have been distressed to find that population is moving from the country districts to the cities and towns. It has occurred to some of them that the thing to do is to colonize city people in the country. This plan is just about as wise as that of pumping water back from the lower into the upper lake. It would only accelerate the movement cityward. It ought not to take a very wise man to see that it would be wiser to find out why the people are moving cityward and then, if possible, remove the cause.

One reason undoubtedly is that, for some years at least, the rewards of labor have been higher in the cities than in the country. That which we now call the rising cost of living is partly a movement toward an equilibrium; that is, toward a condition where the rewards of industry are approximately as great in the country as in the city. When the farmers are enabled to get a little higher price still for their products, we may expect that the equilibrium will be reached.

There is another reason, perhaps still more important, why country people move to the city. Some of the most prosperous of the country people do not find in the country the means of social, intellectual, and æsthetic satisfaction which their prosperity enables them to afford. They find them in somewhat greater measure in the towns and, since they can afford to do so, they retire from the farms to the towns. This movement of prosperous people from the farms to the towns will never

be stopped until the country offers as great attractions as the towns. Until this is done, the faster farmers become prosperous enough to afford to retire to the towns the faster they will retire.

Another reason why country people move to cities is that some of them have not been trained to see and appreciate the real satisfaction which country life affords. People who think that an electric sign is more beautiful than a sunset, that shop windows are more beautiful than grass and trees and flowers, that crowded streets are more beautiful than open fields, that one of our modern plays, most of which are written by men who mistake neurosis for mentality, is more beautiful than an outdoor pageant will probably continue to go to the cities. Well, the country will be well rid of them.

There are two things above all others which need to be done: the rewards of labor, abstinence, and enterprise in the country must be still further increased, and more of the adornments and embellishments of life must be made available for country people. In order to increase the farmers' income we must spread scientific information more effectively, we must have better methods of marketing, of purchasing farm supplies, and of financing the farmers' business enterprises. In order to increase the adornments and embellishments of life in the country, we must have better schools, better sanitation, better recreation, and more general beautification of the countryside. These are all essential parts of a constructive rural program. Every item in that program calls for organization.

First in order is the problem of increasing farm production. The glib urbanite who tries to cure the rural community by the method of absent treatment is always ready with his favorite prescription of intensive cultivation. During the closing years of the last century England was suffering from an agricultural depression. In 1897 a parliamentary commission was conducting inquiries into the state of agriculture and the reasons therefor. A great deal had been said about intensive agriculture

and the increase of crop yields as an offset to the low prices which products were bringing. The sublime intelligences which set forth this theory did not seem to be blest with even a sense of humor. Otherwise they would have seen the absurdity of trying to increase the supply of farm products as a remedy for low prices.

Sir John Lawes, probably the greatest promoter of agricultural science in modern times, was called before the commission and was able to prove conclusively that, as you increase your yield beyond a moderate amount, each bushel added to the yield costs you more and more and that the last bushel so added always costs you more than any of the others. He also showed that when prices are low the individual farmer must reduce rather than increase his yield, because under such intensive cultivation as will force a high yield the last bushels would then be produced at a loss. Nothing but high prices will justify the farmer in trying to force a high yield from each acre cultivated, since, as Sir John Lawes clearly showed, the extra bushels added to make the high yield are always produced at an extra cost.

Not only does it take an increased cost to increase the yield per acre, but, normally, an increased acreage involves increased cost. Land differs in its productivity, and the cost of production per bushel is greater on one acre than on another. When prices are low it pays to cultivate only the better acres, or those on which the cost of production can be kept below the price at which the product will sell. But when prices rise, it then pays to cultivate inferior acres, and it pays under no other conditions whatsoever.

Here we have, therefore, one of the most important laws of agricultural economics. As prices fall, not only must the farmer reduce his yield per acre, but he must reduce his acreage, if he would avoid bankruptcy. He must reduce his yield per acre to the point where the last bushel forced from the soil costs no more than the price which he gets for it; and he must reduce

his acreage, keeping the better acres in cultivation and rejecting the poorer, to the point where the poorest acre cultivated can be made to yield some bushels at a cost no greater than the price which they will bring.

When farmers generally do this, and they who do not will speedily be eliminated through bankruptcy, the result is not only a reduction in the yield per acre throughout the country, but also a reduction in the acreage in all old and well-settled communities. New communities, where there is virgin land to be had for the asking, may still attract settlers. In fact, the presence of vast areas of this virgin land, rapidly settled and reduced to cultivation, has been, during the last half of the nineteenth century, a cause of the low price of farm products. The settlers were not farming for profit, but farming to make a living. Their profit came through a rise in the value of the land which cost them nothing. This frontier condition, however, we must now begin to regard as temporary and abnormal. We must henceforth base our calculations and our agricultural policy on the permanent and normal conditions of old settled communities.

Inquiries made by Secretary Houston show that, even within the humid belt, only a fraction of the tillable land is under cultivation, and of that which is under cultivation only a fraction is yielding satisfactory returns. This is easily explained by the fact of low prices for farm products in the past — low prices which were due in large part to the rapid settlement of virgin land, together with the economic law just explained. Prices have been so low that farmers did not find it profitable to try to force a high yield per acre, which, as shown above, involved high cost of production. Moreover, they have found it profitable only to cultivate the more productive acres or the acres where the cost of cultivation was lowest, leaving the less productive acres untilled.

Now that prices are rising we may expect these conditions to be cured automatically, provided hindrances be removed

and provided time be given. The habits of fifty years cannot be quickly changed by any farming community. As prices rise, however, not only can each farmer afford to cultivate his land more intensively, thus forcing a larger product per acre, but acres which were formerly unprofitable will become profitable to cultivate.

Several difficulties will retard progress in this direction. In the first place, the scarcity of good farmers is a hindrance. Perhaps it ought to have been mentioned earlier in this discussion that not only does land differ in productivity, but farmers as well. The effect of low prices is not only to force the poorer acres out of cultivation, but also to force the poorer farmers out of business. Only the men who can produce at lowest cost will remain in the business. If, when things start upward, the supply of good farmers is scarce, prices must rise until poor farmers can succeed before agricultural production can expand very rapidly.

In the second place, in order that the farmers of the present may expand their operations, both by cultivating their land more intensively and by cultivating lands which were formerly unprofitable, and in order that new farmers who could not succeed before may now succeed in the business, the cost of farm supplies must be kept down. If everything which the farmer has to buy rises in price as much as what he has to sell, his cost of production rises as much as his gross income, and he makes no more profit than before. It is therefore of the utmost importance that the farmers be encouraged to buy at least the raw materials of their business at wholesale rather than retail. By the raw material of farming is meant such things as machinery and tools, fertilizers, seed, lumber and building materials, and fuel. Any organization which attempts to exploit farmers in these fields, and to add to the cost of these materials, adds to the cost of producing crops. This has the same effect on the depression of agriculture as does a fall in the prices of farm products.

Since capital is coming to play such an important rôle in agriculture, the cost of credit is coming to be an important factor in the cost of growing crops. This, again, affects agricultural expansion precisely as does the price of farm products. That is to say, poor credit facilities and a high interest rate will depress agricultural production as surely as will a fall in the price of farm products. On the other hand, good credit facilities with a low interest rate will stimulate agricultural production as surely as will a rise in the prices of farm crops. The poor credit facilities and high interest rates of the present time must be regarded as a third obstacle to the proper expansion of our agricultural production, helping to counteract the stimulating effect of high prices.

How can a farmer possibly get credit on easy terms unless he has a good basis for credit? This question is asked more frequently than any other by skeptics on the subject of rural credit. Of course, there is only one answer: he cannot. But it is too often assumed by people who pride themselves on their hard-headedness, and who fail to distinguish between hardness and impenetrability, that the only good basis for credit is property or collateral. Real financiers have always seen deeper than this, but many of the rank and file of those who deal in securities, credits, and collateral are not financiers of any kind, either great or small, though they imagine that they are. They are sometimes unable to see beyond the things which clutter their desks and fill their pigeonholes. To such men the suggestion that character may be a satisfactory basis for credit doubtless seems rather humorous.

The suggestion loses its humorous quality when we consider its fundamental importance. Unless honesty is, or can be made, an advantage in business, honest men cannot generally win against rogues in business competition. The result will be that rogues can never be eliminated from business. It is difficult to see how honesty can have greater advantage over dishonesty anywhere than in the field of credit. Unless the honest man

can secure credit on easier terms than a dishonest man, where does honesty pay? Of course, men ought to be honest, whether it pays or not, but this kind of a preachment is not going to eliminate dishonest men from business. So far as collateral is concerned, a rogue may have it as well as a saint.

The possibility of making character a basis for credit is of peculiar and vital importance to our agricultural development. The men upon whom we must depend for the future expansion of our agricultural production have not much else. The well-to-do farmer, who has already accumulated a considerable fund of property, is not the farmer who is likely to clear and reclaim new land, and bring under cultivation the vast area of tillable land both east and west, north and south, which is still untilled. This gigantic task will be performed, if at all, by young men who have little except their hands and their pluck and determination. Such were the men who reclaimed and subjugated the lands now tilled, and such will be the men who reclaim and subjugate the lands still untilled. Such were the men who built the rural homes in which the best of our present population was nurtured, and such will be the men who build the rural homes in which the best of our future population will be nurtured. It is through such men that our financial interests must work if they are to be of the greatest use to the agriculture and the rural civilization of the future.

The farmer who is to cultivate the present untilled area has one problem to face which did not worry the pioneer farmer of the past, though the pioneer farmer had a good many problems which the farmer of the future will not have; that is the problem of supplying himself with capital. Most of the land upon which a farmer could begin growing crops without a considerable preliminary expenditure of capital has already been brought under cultivation. That which remains requires such an investment as pretty generally to exclude the home-seeker who has nothing but his own labor to invest. Unless some

method can be found which will enable him to supply himself with the necessary capital, farming will cease to be an opportunity for the home-seeker in America.

So generally is this fact understood that some students of the problem have concluded that the day of the small farmer is ended, and that hereafter we must depend upon the large capitalist farmer or the farming corporation. That would be a pity. Where the two have equal opportunities, the small or middle-sized farmer has always beaten the big farmer and the farming corporation in competition. There are only two conditions under which the big capitalistic farmer has won out. The first is where he has had a large supply of cheap labor, such as slaves, or gangs of coolie laborers, which he could direct and control. The independent small farmer who works with his own hands has then found himself compelled to compete with those cheap laborers, and he has had "a hard row to hoe." The other condition is where the big farmer, or the farming corporation, has had some advantage in bargaining over the small farmer. If he can buy his supplies to better advantage, if he can secure capital on more favorable terms, if he can sell his produce to better advantage, he may succeed in competition with the small farmer. But when it comes to the real work of production, as distinct from bargaining — that is, as distinct from hiring labor, borrowing capital, buying supplies, or selling produce — the small farmer can beat the big farmer and eventually run him out of business. That is to say, as a producer the small farmer has no equal; as a bargainer he is often at a disadvantage.

From the standpoint of the statesman, efficient production is more important than efficient bargaining. Something should be done, therefore, to put the small farmer, who has proved to be the most efficient producer, on an even footing, as respects bargaining, with the large farmer. If that can be done we shall enable the small farmer to flourish, and through him we shall have the most efficient agricultural production possible.

One of the best ways to begin is to find some plan which will enable the small farmer to borrow capital on terms approximately as easy as those which the big farmer can secure. If the small farmer lacks both character and collateral, it is difficult to see how anything can be done for him. But if he possesses character, there is a way out of the difficulty.

By character is meant possession of such economic virtues as industry, frugality, sobriety, forethought, and honesty. Let us suppose that a certain farmer, Jones by name, possesses these virtues — that he is willing to work and to save, that he is sober and forehanded, and that he will always pay his debts if he can possibly raise the money. But there's the rub; can he raise the money to pay a debt when it is due? If he can, it is safe to lend him. If he cannot, it is unsafe, no matter how honest he may be.

Here is where the banker may come in and amply justify his existence. It is not enough that he sit in his office and scrutinize the security and collateral of would-be borrowers. That is the job of a cashier, or some one without discretion who must follow fixed rules. It is the banker's job to see that the money which Jones borrows is so used as to provide the borrower pretty surely with the money with which to pay his debt when it is due. By this is meant that the banker's function is to finance productive enterprises, and his first qualification is the ability to decide what is and what is not a productive enterprise. That is what a good investor is. The banker, especially the country banker, ought to be a good judge of investments. There may be room for a finer differentiation of functions in a city, where some bankers may be financiers, and others mere custodians of funds, to receive deposits on the one hand and lend them out on good security on the other. But a country banker must be both.

Now, if our country banker is a good financier, that is, a good judge of investments — one who can tell what enterprises are likely to succeed and what are not — he can be of great

service to Jones. That is where Jones is weak. He has probably had little training or experience in that direction. His expertness lies in other fields. He may be an excellent judge of live stock, a good hand at growing corn, cotton, or wheat, but he has not — more's the pity — been trained in the keeping of cost accounts. His investments are therefore largely guess-work. He *thinks* that he would like to have this or that — a pure-bred bull, a few dairy cows, some brood sows, a silo, some tile for the drainage of his land, a new barn, etc. If he could get the money he would have them. But it is hazardous to spend good money for things which one only *guesses* may pay. It is, therefore, hazardous to lend money for such a purpose.

Now, if the banker, with his expertness in the matter of investments, could form an alliance with Jones, with his expertness as a grower of crops, we should have an ideal arrangement. The banker should have studied for years the investments of hundreds of farmers in all the surrounding country. He ought, therefore, to have pretty clear ideas as to whether a silo will be money in Jones's pocket or not, whether a pure-bred bull, or a herd of dairy cows, will provide Jones with enough money to enable him to pay back a loan, and leave him a profit besides. If so, it is safe to lend him the money. Being honest, Jones will pay his debt if he can possibly raise the money. The purpose for which he borrowed the money being a profitable one, he will have the money. And there you are.

It is, of course, much easier for a banker to sit in his office and scrutinize the notes offered, their security, or the collateral on which they are based. It is much a harder job to estimate Jones's character, and to determine whether it will pay Jones to borrow or not. Character is not self-registering. Therefore it requires judgment and discretion on the part of the lender if character is to be made a basis for credit. But while this job is harder, it is infinitely better worth doing. Besides, the banker who performs this function will be an active builder of agricultural prosperity in his community. In the end it will

add to the prosperity of bankers because of the increased volume of business, and the greater wealth and prosperity of the entire community. After all, that is what banks exist for. Agriculture does not exist for the support of banks. Banks exist for the support of agriculture and other industries.

Bankers owe it as a duty to the country to see that the capital which they control gets into the hands of those who can make the best and most productive use of it, and that it is used for productive rather than for unproductive purposes. Suppose that on an irrigation project water were used on poor lands, where it would not produce much, merely because the owners were able to pay for it, while good and highly productive lands were deprived of water. That would clearly be a waste of good water. The total productivity of the project would be increased if the water were put where it would produce the most, that is, where the land would respond most abundantly. It would be an equally bad waste of water if a poor farmer were permitted to use a quantity, merely because he were willing to purchase it, thus depriving some better farmer who could produce more with it. Again, it would be a waste of good water if it were allowed to be used in the irrigation of crops which didn't pay, while highly profitable crops were suffering for water.

It is similarly a waste of good capital to allow it to be used by less productive men when more productive men might use it, or for a less productive purpose when it might be used for more productive purposes. The productivity of the would-be borrower does not always depend upon the amount of tangible property or collateral he can put up as security, nor does the productivity of the purpose for which he wishes to use the borrowed capital depend upon that kind of security. In order to secure the maximum economy of capital, which is the banker's function, he must, therefore, look beyond the tangible security and scrutinize the character of the borrower and the purpose for which he wishes to borrow.

The banker who secures an economic use of the capital which he controls is one of the most productive members of his community, contributing largely to its prosperity. The banker who does not secure an economic use of capital is a parasite, living off the community and contributing nothing to its prosperity. He does, of course, help to secure an economic use of capital when he merely borrows, or receives deposits, from those who have no immediate use for their capital and lends to those who do. But he should go farther than this, and see to it that the capital which he lends is put to a productive rather than to an unproductive use.

There is probably not a farming community in the United States which does not need some, at least, of the things named in the above outline. Yet none of these things can be secured by individual farmers each working alone. Some form of "team work" will be found necessary or advantageous in every case. They who cannot or will not work together are always in a weak position when brought into competition with those who can and do. Team work counts as much in business competition as in athletic contests; but the team work, in either case, needs to be wisely directed according to a well-considered plan.

Excellent work has already been done by a number of farmers' organizations. They have undertaken a stupendous task, and they have grappled with it courageously. But the work of organization is inevitably slow and difficult; for the more than six and a half million farmers in the United States are widely scattered, they have a great diversity of interests, many of which are difficult to harmonize, and farmers are temperamentally an independent, headstrong, individualistic class, disinclined to union of any sort. The recognition of the work of rural organization by the Secretary of Agriculture as a legitimate part of the work of his department should be a great help, and will probably mark an epoch in the history of American agriculture.

Since the opening up of the vast territory west of the Appalachians, and the first beginnings of the public-land policy of the United States, the farming in this country has been more individualistic and less organized than that of any other civilized country. Our methods of disposing of the public lands, under the preëemption and homestead acts, encouraged this system. Each settler was treated as an isolated individual and his farm as an isolated economic unit. So long as there was an abundance of fertile soil to be had for the trouble of living on it, agriculture could flourish under this system, and the statistics of agricultural production and exportation could continue to swell. The individual farmer frequently remained poor, or profited, if at all, through the rise in the value of his land rather than through the sale of his products. This condition of the individual farmer did not always attract the attention of statesmen and publicists. They were interested rather in the expanding figures of total national production and exportation, to which they could always point with pride.

Only the best and most easily tilled lands were suitable for this kind of farming. The result has been, as ascertained by a recent inquiry of the Secretary of Agriculture, that only a fraction of the tillable land, even of the humid portion of the country, has been reduced to cultivation. The tendency has been to pass by the second and third grade lands, or the lands whose initial expense of cultivation was high, and cull out the best and most easily cultivated lands. The time has now arrived when the continuation of that policy is carrying our pioneer farmers beyond the boundaries of the United States into Canada and Mexico. Meanwhile vast areas of tillable land at home remain neglected.

If it were invariably true that superior lands beyond our own boundaries were being taken up to the neglect of inferior lands at home, there would be much to be said in favor of this policy. At any rate it would be hard to find a convincing argument, aside from the appeal to patriotism, to show a farmer

why he should remain on inferior land within our own borders when he might find superior land just over the boundary. There are reasons, however, for believing that the farmer finds abroad no better lands than he had passed by at home. The new lands may appear more profitable, for they are virgin soil, capable of lucrative exploitation for a few years; they can be made to grow heavy yields of a single money crop, and that, too, a crop like wheat, for which there is a highly efficient and very active market. The farmer's marketing problem is solved for him, and he can continue his highly individualistic farming. And yet the lands left untilled might also be highly productive, not with a big single staple crop, but with various kinds of agricultural specialties.

Now the characteristic of an agricultural specialty is that there is no organized market for it, and it does not regularly sell at a quotable price. If it did it would not be a specialty. The isolated small farmer could scarcely make a living by growing this kind of a crop unless he was near a large city, and even there he would probably have to give as much time and thought to the marketing of his crop as to the growing of it. If he were not thus favorably located he could scarcely market his specialty at all, unless he were either growing it on a very large scale so that he could maintain a selling agency of his own, or were coöperating with a group of other farmers for the same purpose. Farmers thus organized could make more off some of this land which is now being neglected than they could possibly make off the virgin lands of the far Northwest; but as isolated, unorganized farmers, they can doubtless make more off those new lands, growing a staple crop which almost markets itself. Until we succeed in developing an organized rural life — until our farmers are willing to work together instead of working as isolated, unorganized units — they will continue to neglect such lands as require organization for their successful cultivation, and migrate to new lands which are capable of being farmed by the old methods.

A similar problem is met with in the promotion of irrigation farming. There are only a few places where an individual farmer can reclaim land and bring it under irrigation. Until some organization could be formed to handle the problem, or until the state or federal government took up the matter, individual farmers ignored very productive irrigable land in favor of inferior land which had the advantage of being capable of individual reclamation. Again, there are vast areas which require drainage. In only a few cases can this drainage be done by individual small farmers. Consequently these lands have generally been neglected in favor of lands which, though ultimately less productive, have the one advantage of being suitable for immediate cultivation by unorganized, individual farmers. Even government enterprise, in the case of irrigation and drainage projects, unless supplemented by organized work on the part of the settlers, will prove insufficient. Such government projects will eventually fail to attract settlers unless the government either sells the land to them below the cost of reclamation, which would be bad economy, or else organizes them to work out their marketing and financial problems so as to enable them to make enough off the land to pay the cost of reclamation.

The issues which depend upon an organization which will bring about the utilization of lands now neglected are more far-reaching than most of us are prepared to believe. The migration of our people in great numbers to other countries in their search for new, easily tillable soil may be productive of serious international complications. When the new settlers find governmental and social conditions satisfactory, as they do in Canada, trouble may be avoided. When they find them unsatisfactory to themselves, as they did in Texas and Hawaii, as the English did in South Africa, and as we are certain to do in countries whose civilization is different from our own, then trouble cannot, by any possibility, be avoided. Therefore, even the problem of international peace depends upon our

ability to find productive opportunities for our expanding rural population at home, and this in turn depends upon a rural organization which will make possible the successful farming of lands now being neglected.

More important even than international peace is the preservation of the prosperity of the small farmer, who does most of his own work on his own farm. His salvation depends upon his ability to compete with the large farmer or the farming corporation. Two things threaten to place him under a handicap and to give the large farmer an advantage over him in competition. If these two things are allowed to operate, the big farmer will beat him in competition and force him down to a lower standard of living, possibly to extinction.

One thing which would tend in that direction is a large supply of cheap labor. The small farmer now has an advantage because of the difficulty which the big farmer has in getting help. So great is this difficulty that many of the bonanza farmers are giving up the fight and selling out to small farmers. That is, the big farms, the farms that can be cultivated only by gangs of hired laborers, are being divided up. Give the owners of these farms an abundant supply of cheap labor — make it easy for them to solve the problem of efficient help — and they will begin again to compete successfully with the small farmer who, because he does his own work, has no labor problem. If we can keep conditions such that the capitalistic farmer has great difficulty in getting help, the small farmer will continue to beat him in competition, and the bonanza farm will continue to give way to the one-family farm.

Another thing which threatens the prosperity and even the existence of the small farmer is the handicap under which he finds himself in buying and selling. The big farmer that can buy and sell in large quantities, and also employ expert talent in buying and selling and in securing credit, has an advantage over the small farmer who must buy and sell in small quantities and give his time and attention mainly to the growing of crops

rather than to selling them. Much of the supposed economy of large-scale production, even in merchandising and manufacturing, is found, upon examination, to consist wholly in an advantage in bargaining; that is, in buying and selling. When it comes to the work of *growing* farm crops, as distinct from *selling* them and *buying* raw materials, the one-family farm is the most efficient unit that has yet been found. But the big farmer can beat the individual small farmer in buying and selling. It would seem desirable, from the standpoint of national efficiency, to preserve the small farm as the productive unit, but to organize a number of small farms into larger units for buying and selling. Thus we should have the most efficient units both in producing and in buying and selling.

If this is not done, the only farmers who can enter successfully into the production of agricultural specialties, where the problem of marketing is greater than the problem of producing, will be the big capitalistic farmers. The small farmer may hold his own in the growing of staple crops, in which field the problem of economic production is perhaps greater than that of efficient marketing. But even in the growing of staple crops the small farmer will have a hard time of it if he is forced to compete with the big farm cultivated by gangs of cheap laborers. The two worst enemies of the small farmer are the opponents of coöperative buying and selling on the one hand, and the advocates of enlarged immigration to the rural districts on the other. The latter would help the big farmer in the *buying* of labor for his farm, and reduce the price of the small farmer's own labor when he undertook to sell it in the form of produce.

How to organize the rural interests of this country effectively is one of the most difficult problems in the world. A very little study of the history of farmers' organizations in this and other countries ought to convince any one of this. While there have been many successful organizations, yet the number of failures easily outnumbers the successes two to one; but the

fact that there have been a large number of successes in the aggregate makes it possible to believe that there may be more in the future. If we can only find why some have succeeded and others failed, we shall then be in position to follow the policies which have succeeded and avoid the errors which have led to failure. This will materially increase the percentage of success and decrease the percentage of failure.

The difficulties in the way of effective organization of rural interests are not hard to find. They may be classified under four general headings: arithmetical, geometrical, economic, and psychological.

By the arithmetical difficulties we mean the difficulties growing out of the fact that the farming class is by far the most numerous economic class in the country. Six and one-half million individuals would be difficult to organize effectively, whatever other conditions might exist.

In addition to the vast number of farmers, there is a second fact, that they are so far apart. This is what we mean by the geometrical difficulty. The mere geometrical fact that they live farther apart and are more widely scattered than other classes adds materially to the difficulty of organizing them. This in turn grows out of the fact that agriculture more than any other industry requires land surface, superficial area, space. That being the case, it is impossible for farmers to live close together in compact masses as other classes do.

By the economic difficulties is meant the fact that there is a great diversity of interests with many antagonisms among this vast number of farmers living over such wide areas. The truck farmers of one section, for example, have to compete for a market with the truck farmers of other sections. Even though the farmers of one section were all organized, it would be difficult for them to adjust their rivalry in such a way as to form an effective organization with those of other sections.

By the psychological difficulties is meant a very large but somewhat intangible fact, namely, that a process of selection tends to attract to the cities those members of our population who are easily herded together and to leave in the country those who are strongly individualistic, who prefer to be their own bosses, and who have the capacity for self-direction. All of those people to whom the pain of a new idea is excruciating, who find it a great hardship to have to decide what to do next, will find farm life unendurable. That perhaps more than any other single fact characterizes the life of a farmer. His work never can be standardized. He must always be in the act of deciding what to do next. His work from day to day, even from hour to hour, has to be adjusted to the conditions of soil and climate, the exigencies of plant and animal life, as well as of the weather. This is no kind of a life for a man who is only capable of doing what he is told, and incapable of deciding himself what is the next thing to be done. This process of selection, as I said, makes a rural population very independent in spirit and temperamentally difficult to organize.

Another psychological difficulty perhaps grows out of the fact that the farmer's success has in the past depended very little upon his mental adaptability to other men. He has had to control the forces of nature rather than the forces of society. He is therefore less adept in those arts and graces which adorn social life, simply because his living has not depended upon it; but those of us, and we include a large proportion of the urban population, who, however useful our work, live because we succeed in pleasing other people, who succeed not by making two blades of grass to grow where one grew before but by making two dollars emerge from other people's pockets where one emerged before, must of necessity be somewhat successful in the art of getting along with people. The urbanite who cannot get along easily with other people will starve, and the process of natural selection tends to breed up a race of urban people who get along easily together. In the past this has not

been true of the farmer. If he could grow good crops or breed good animals he could succeed whether he was successful in the art of getting along with people or not. We have therefore bred up a race of country people without that principle of selection which has made city folks "urbane."

However, because a thing is difficult to do is no reason for not doing it, if it is really worth while. That the effective organization of rural interests is worth while, that it is in fact about the most worth-while thing in the world, will be apparent upon a very little consideration.

Good transportation facilities and means of communication have destroyed an older condition under which each local community had to be mainly self-supporting. I am not speaking now so much of the still earlier condition where we had the self-sufficient farmer who produced on his own farm practically everything which he consumed. I am speaking of a somewhat later period when a farmer sold a portion of his material at least, but sold it to the neighboring town, which was usually within hauling distance, and who got his supply of things not produced on the farm from the workingmen of the shops of the neighboring town. The marketing problem was here fairly settled. The farmer hauled his produce to town and showed it to the buyer, who could inspect it and "paw" it over, if necessary — and buy it if he liked it.

Again, the age of machinery has destroyed the conditions which existed at one time, even within the memory of a few very old men who are still living. I refer to the condition under which capital could scarcely be called a factor in agriculture. Capital is tools and machinery, though it is sometimes referred to as the money necessary to purchase tools and machinery. In an age when farming was done with a few simple tools which the farmer made himself or which were made by the local blacksmith there was no demand for capital in the modern sense; that is, it was not a limiting factor as it now is. It was not a factor which by reason of its scarcity relative to the need would

make successful farming impossible. At that time you could not say of any farming community, "The great need is more capital." If the farmers had had an abundant supply of capital they would not have known how to use it, because the invention of agricultural machinery had not yet appeared.

At the present time all of that is changed. The farmer who cannot equip his farm with an adequate supply of stock and tools cannot compete and is foredoomed to failure. Capital is one of the limiting factors. There are many communities of which you can say, "If they had more capital they would succeed. Without more capital they will fail." Therefore it has come about that one of the great agricultural problems is that of supplying farmers with capital.

Again, there was a time when most of the diseases which prevailed in rural districts were either regarded as visitations of divine Providence, or at least as something which could not by any possibility be avoided. He who embarked upon life had to take the chances of life, as he who enlists for war has to take the chances of war. Such a thing as preventing disease by stopping it at the source was impossible, because people did not know the source. Organizations for rural sanitation would have been out of the question, because however well organized the country people were they would not have known what to do with their organizations in the way of improving sanitary conditions.

So in a multitude of other respects the agricultural situation has so changed as to make it absolutely necessary that the modern farmers organize. Since the farmer produces not for a local but for a far-distant market, he cannot haul his stuff to town and sell to the consumer. He must part with it at the station and consign it to the tender mercies of the middlemen whom he has never seen and concerning whom he knows only the names. The individual, unorganized farmer is not in a position to market successfully under these conditions.

When his success as a farmer depends upon his having an adequate supply of capital he is about equally helpless unless he

has inherited or otherwise acquired the necessary funds. For perfectly legitimate and obvious reasons the possessor of capital does not like to let it get out of his hands unless he feels reasonably certain of getting it back again at some time or other. He cannot be blamed for that. We are all alike in that respect. But the market for capital, like the market for farm produce, is nation-wide or world-wide, and not a local market. They who possess the capital which the farmer needs are seldom his near neighbors. They live a long way off and do not know him even by name. Under these conditions his only chance of getting capital is through a series of brokers or middlemen, unless he can organize with his neighbors to perform for themselves the function which these middlemen perform. And with the purchasing of his farm supplies the same conditions arise. His tools and machinery, his fertilizer, etc., are not usually produced in his immediate neighborhood. An individual, unorganized farmer is under about the same disadvantage here that he is in marketing his produce in distant markets.

Sanitation, the extermination of the fly, the mosquito, the hookworm, and other pests which afflict the lives of the country people, is possible only by a thorough organization of rural neighborhoods. An individual farmer may be ever so careful to destroy all breeding places for flies and mosquitoes on his own farm, but it will do him little good if all his neighbors are careless.

These are some of the reasons which make the organization of rural interests of such transcendent importance at the present time.

At one time the idea seemed to prevail that agricultural education consisted mainly in informing the farmer as to the best methods of growing crops and feeding animals. This idea has rapidly broadened out until the idea has already taken possession of the minds of the people that it is equally important that farmers be informed as to the best methods of marketing the products which they have grown, of purchasing the raw materials for farms — for the farmer is now a purchaser of raw

materials almost in the same sense as the manufacturer is — and of supplying themselves with capital.

The idea therefore seems to prevail at the present time that all that is necessary is to enable the farmer to grow his products and to buy and sell to advantage in order that his income may be increased. I dare say that most people who are thinking on this problem to-day believe that the problem is solved when the farmer has been assured a satisfactory income. I wish to insist, on the contrary, that this is only half the problem. Paradoxical as it may seem, it is a matter of actual observation that the sections of the country where the land is richest, where crops have been most abundant, where land has reached the highest price, and the farm-owners attain to the highest degree of prosperity, are the very sections from which the farm-owners are retiring from the farms most rapidly and leaving them to tenants.

Now I need not enlarge upon the evils of absentee-landlordism. It is perhaps sufficient to say that absentee-landlordism never did work in the history of the world and it is not likely that any miracle will happen to save this country from disaster if it drifts into that vicious system. When the owners of the land live at a distance they have no particular interests in country schools, churches, or any of the civilizing influences which make country life attractive. Therefore all these civilizing agencies tend to disappear. Similarly, the tenants who are here this year and somewhere else the next have no interest in maintaining the social institutions of any rural neighborhood. I am willing to state deliberately that there is no pest or plant or animal disease known to man which will bring ruin upon a country so rapidly as the system of absentee-landlordism.

But why do these prosperous farmers leave the farms and go to town? Simply because the town contains the things they want to buy with their money and the country does not. We may as well face the fact first as last that there are only two things that will keep people in the country. One is poverty,

or the inability to live in town. The other is an attractive country life which will induce people to stay in the country even though they are financially able to live in town. As between these alternatives there is no room for choice. To try to hold people in the country by their poverty or their inability to get away from the country and get to town would be criminal. The only thing, therefore, is to make country life sufficiently attractive to keep people in the country even when they are prosperous enough to live in town.

This will indicate that the problem of organizing rural interests is very much wider than the problem of marketing; or of marketing, of rural credits, and of purchasing combined. It is much wider than all the problems connected with the increase of the farmer's income, because getting the income is only half the process. It is just as important that we solve the problem of spending it wisely and rationally in order to get the maximum of enjoyment as it is that we solve the problem of getting it. I think it is a fair proposition that the American people are more expert in the getting of incomes than they are in the spending.

Conditions, however, vary in this respect. There are many poor sections where farming is unprosperous and the first and most acute problem is to increase the farmer's income; but there are many other sections which are so prosperous that the other question has become more acute, namely, the question of spending the farmer's money. There being an imperfectly organized social, intellectual, and æsthetic life in the country, the farmers are driven to the towns to find the satisfactions of life which their prosperity enables them to purchase.

While, as stated above, the conditions vary considerably in different parts of the country, it is my belief at the present time that the latter of these two questions is for the country as a whole, on an average, even more important than the former.

I have classified problems calling for organization under the following outlines:

- I. For increasing the farmer's income:
 - (a) the marketing of farm products,
 - (b) the purchasing of farm supplies,
 - (c) the securing of adequate credit,
 - (d) the improving of means of communication and transportation.
- II. For better living conditions in the country:
 - (a) education,
 - (b) sanitation,
 - (c) recreation,
 - (d) beautification.

Every part of this program calls for organization and it must ultimately be the work of any government agency, such as the Office of Rural Organization, looking toward the effective organization of rural interests to promote it in every detail.

In beginning this work the first thing for us to do was to study the field, in order to discover what is actually being done by the American farmers in the way of organization. Much of the time of our staff during the present year has been given to this general survey of organization conditions in the country, the theory being that it is better to develop what we have, or build upon the foundations already laid, than to try to invent or import new methods of organization.

Again, it is quite as essential to study the failures as the successes in the way of organization in order that we may form some idea as to why those which failed have failed and why those which succeeded have succeeded. Even this is a very large task, as any one will find who tries it. It is not a thing which can be accomplished in a single year.

Along with this general survey we are trying a few modest experiments to see whether our generalizations are correct or not, the theory being that it is better to go too slow than too fast, for a few bad mistakes or conspicuous failures in the be-

ginning of this movement will produce a reaction and set the whole movement back for another generation. We have found certain methods of purchasing farm supplies which seem thoroughly business-like and satisfactory, both to the manufacturer and to the farmer. These are being tried out, others are being encouraged, and the information is being given out in order that others may make use of the experience already gained by the successful communities.

No experiments are being tried by the Office of Rural Organization in the field of rural credit, although a number of experiments actually going on are being carefully studied. Many would doubtless be surprised to know just how much is being done in the way of credit organizations among farmers. In a closely allied field, namely, insurance, the work of organization is long past the experimental stage, and the upper Mississippi Valley is dotted with mutual insurance companies.

We are attempting a comprehensive organization of the rural interests in one selected county in the South to see what can be done there in order to gain experience. We shall carry the results of that experience to other counties whenever we feel sure of our ground. These are very modest beginnings, it is true, and may be disappointing to some people, but, as I said before, we are of the opinion that it is better to go too slow than too fast, and in the second place, it is better to study the experiments which other people are carrying on than to attempt to carry on many independent experiments of our own.

THE SOCIAL CENTER AND THE RURAL COMMUNITY¹ .

HERBERT QUICK

THE conscious demand for organized social centers is a thing of recent growth. Like most conscious social demands, it springs from a need too long left unfilled. Those of us who feel the call to action in this new cause should, if possible, formulate in our own minds the need to be met.

The movement has been most vigorous in certain cities. It has taken in some places the form of entertainment courses, closer to the community than the theater or the Y.M.C.A. or the ministrations of the lecture platform. It has thus been urged as a means of bringing literature and art into the neighborhood. But I think it would be a mistake to identify the social center movement with entertainment only.

In other places and at other times it has assumed the phase of offering to neighborhoods dances and social functions of a more local character and a more unobjectionable sort than the similar affairs offered for profit by individual promoters. But I feel sure that the movement means more than social intercourse and amusement.

On other occasions it has sought to bring the people together for the discussion and consideration of sociological and political questions, and for debates and literary exercises. This has been successful in stimulating the citizen to more active participation in public affairs. But the social center means much more than this, I feel sure. Entertainment, amusement, social

¹ An address delivered before the National Education Association, July, 1912.

functions, political and sociological discussion and debate — these all belong in the picture; but there is an underlying psychological demand which appears in all these functions and dominates them all. That demand is, in my opinion, the feeling running all through society that the common, ordinary citizen must learn to coöperate with his fellows as a means of fostering the common good. And when we come to consider the social center as related to the rural community, if the treatment is not to take us outside the field of the social center as ordinarily conceived, we must keep in mind the basis of the movement, the need for coöperative action in neighborhoods.

We are all familiar with the fact that as the nation grows older the people seem in some way to become less homogeneous. The neighborhood fellowship which seems to prevail in European neighborhoods is the outgrowth of the ages. The country community which Hardy limns in his Wessex parishes, or which Blackmore describes to us on Exmoor, or Scott in the lands north of the Tweed, seem to possess a neighborhood solidarity altogether lacking in most American communities. We have thought that this neighborhood, needing centuries for its growth, might be expected in America as a flower which time will cause to bloom. But American life seems to tend otherwise. In New England, where the historic perspective is longest, neighborhood seems to be weakening as the years pass. The social relations in rural communities in most parts of the Middle West are not as close as in the pioneer times, when anyone was a neighbor who lived within ten miles, and the necessity of each leaning on the other in the struggle with nature pressed upon everyone, and there was need felt for the making of new friends in the new environment. The telephone may bring people closer together, but the trolley, the motor car, the daily mail, and the increasing number of friends which the average farm family has in town, all, with many other factors, take the place of neighborhood and tend to community individualism rather than neighborhood collectivism. Thus we are

forced to the conclusion that as yet none of the influences which have built up neighborhood groups in older nations are at work here. We are justified in believing that inasmuch as American life is growing up with no feudal and mediæval background, such influences will never come into existence. And a close study of European rural life leads to the conclusion that the older rural groups are not of the sort which we should desire if we could have them, picturesque as they are in literature; and that the superiority which the European farmer exhibits as compared with the American farmer in the matter of rural organization is owing, not to historic factors, but to developments which have sprung from conditions of the last decades of the nineteenth century, and from the early years of the twentieth. The Danish peasant is doing better than the American farmer in this respect, not because he is old-fashioned, but because he is up to date. The splendid achievements of the Irish farmers in coöperation, and the enormous successes of the peasants of Italy, Germany, and France in coöperative banking, come from the new life and not from the old. Everywhere, the new wine is being poured into new bottles, instead of the ancient vessels. The new movements in rural life spell democracy, not privilege.

Rural communities need to get together; but the American farmer is too much of a utilitarian to yield to the attraction of amusement for its own sake, or offered culture, or debates, or lectures. He is hard-headed and rather cynical about new things. Companionship with his fellows may be needed, but the need is not fully confessed or keenly felt. He is rather single-minded in his pursuit of profit in the material sense. Like all self-respecting people, he objects to the process of being "uplifted" by people who take a position above him. If social centers are to succeed in the rural community, their success must come through their ability to serve the farmer and the farmer's wife along the lines of thought and endeavor which appeal to him.

For these reasons the church does not seem able to furnish the nucleus of the rural social center save in rare instances. Here and there, the rural church is doing good work in building up again the lost sense of neighborship; but on the whole churches are losing ground in the country. One of the gravest problems which confronts the churches is the problem of the ebb-tide which is leaving stranded and abandoned churches on so many countrysides. Moreover, the church cannot do the whole work. Many people do not belong to any church. Those who do belong are divided among many denominations, which, if not warring on each other, are not coöperating, and are in no position to coöperate. The church cannot call in aid the powers of taxation, nor the assistance of the state. It may be a social center for the community, but it can never be, and should not be, *the* social center.

The neighborhood club and the coöperative organization are doing good work in places. Women's clubs have worked great changes in some rural neighborhoods. I know of some places where clubs of farmers' wives have kept up for many years successful meetings of a character very similar to the gatherings of people interested in literature, current events, and music in cities. Some of these communities are admirably served by these clubs. But on the whole I feel that there is less of this social activity than there was thirty years ago. The clubs are better, perhaps, than were the old spelling-schools and "literaries," but they are vastly fewer. The need for social centers everywhere, as a potent force in American life as universal as the practice of agriculture, has no hope in these. The communities that most need awakening are incapable of finding utility or amusement in these rather sophisticated and "highbrowish" affairs. Something more elemental and elementary, more useful and more profitable materially, must appear.

Along with this demand for rural centers comes the admitted need for a new kind of rural school. The rural school of to-day

is apt to be in the main a bad copy of a poor city school. It is not related to the country life. It proceeds as if on the theory that farmers' sons should all become clerks or professional men engaged in urban employment and all country girls stenographers, shopgirls, factory employees, or the wives of such city-dwellers. The bias of the rural school against rural life is the one great scholastic blunder of this nation. It has acted as a powerful wind blowing the selfsame way with the baneful tide of allurements and economic pressure which has been for so many fateful years, and still is, emptying the farms into the cities.

Our eyes are becoming opened to the destruction which such schools work on our national life. The word has gone forth that the rural school must be ruralized. It must be correlated with rural life. It must open the eyes of the country children to the beauties of that field of nature in which the farmer acts with, and is reacted upon by, scientific truth. Our arithmetic must deal with the quantities of soil constituents, farm inventories, eggs, poultry, cow-testing, and generally with the computation of problems related to scientific agriculture. Every problem in mathematics must be a problem in scientific rural life. Our nature-studies must deal no more with the koodoo, the mongoose, the toucan, and the aard-vark, but rather with the cow, the hen, the hog, the horse, and the sheep. Our physiologies must abandon the useless anatomies and terminologies of yesterday, and become comparative. The physiology of the domestic animals must be considered with that of the human being to the end that we shall know our animals while knowing ourselves, and each the better for knowing the other; and our hygiene must take in the nutrition of these friends of the barnyard and pasture. Thus the rural school shall become a school of animal husbandry. Geography must so far include the study of soils that the child may know of the plant food in his father's farm, whether he knows the capital of his state or not. Reading and spelling must be related to the life of the farm. History must tell of the movements of agriculture,

rather than of battles or political contests. Pupils will do their language work in reporting the results of experiments in farming, rather than in the diagramming of sentences or the parsing of words. And where such work in systematic grammar is done, the sentences chosen will be such as to possess a background in the real life of the pupils, rather than in mythology or the classics. The school will be completely ruralized.

And in this process the cultural efficiency of the schools will be increased tenfold, because the children will not only imbibe ideas, but will use them. The dreadful uselessness of most of our purely "cultural" studies lies in the feeling on the part of the child that the whole matter is in an unreal world of school and quite aside from the world of life. When the rural schools become real laboratories of farm life, when the boys and girls study in the schools the very things their parents are laboring with on the farm, the habit of thinking about things rather than about words will give vigor to every phase of thought. If I desired to produce a generation of poets, artists, mathematicians, and statesmen, I would begin by giving to the minds of the young the real grain of scientific truth to grind, trusting to the insatiable hunger of the mind which grows by every morsel of truth consumed by it. I once saw in one of these new rural schools a boy sitting with a rack of agricultural bulletins at his elbow, writing on raspberry culture. I asked him why he chose that topic for his essay. "I'm growing raspberries for the market," said he. Language for this boy was a medium for expressing thought, rather than for getting marks. He was interested in the essay, but more in next year's crates of berries. Out of such conditions will come pupils who will make the language glow with meaning, as do Caesar's *Commentaries* and Grant's *Memoirs* — and for the identical reason that gives immortality to these works as literature. In each case the writer will have something to say.

Out of this new kind of country school, I believe, will grow the new kind of rural social center. Already the Babcock

milk-tester, the weed cabinet, the trap nest, the experimental plat of grain, vegetable, or flower are to be seen in and about the rural school. Wherever these schools are correlated with rural life, the social center springs up in the school spontaneously. I am convinced that if it is to live and serve it must so spring up. A farmer in Page County, Iowa, was rather opposed to the newfangled notion of teaching agriculture in the school. But after the milk of his cows had been tested in the school, as a part of its regular exercises, he changed his mind. For by this test he discovered that cows which he had thought as good as any were actually being kept at a loss. The simple classroom experiment in natural philosophy had made it possible for this family to live a fuller and happier life. The school reacted on the home, and the home felt it. To this man the school became as much a part of his life as it had been of the life of his children. The correlated rural school thus becomes a continuation school for every man in the district. And for every woman, too. The girls who compete in the cooking and sewing contests bring their mothers into the work of the school-room inevitably. A link is established connecting every farm with every other farm, and binding them all together. A social center comes into being with or without meetings. But the meetings are inevitable, and with the fact of meetings come social relations, debates, lectures, moving-picture shows, and perhaps dances and games. The people meet because they have something to consult about, and not because some well-meaning person has said, "Go to, now — let us be social."

I am convinced that the school must furnish the nucleus of the rural social center of the future. It must do so by making its work a part of the farm work of the community. It must do so by an appeal to the economic sense of the people. It must do so by taking over and performing a great deal of work that can be done by the pupils to their great educational advantage, and to the financial benefit of the farmers. The schools are equipped, or can equip themselves, to perform a great many

such tasks. They may carry on cow-testing work for the up-building of dairy herds. They may work out balanced rations for the live stock and poultry of the neighborhood, in each case furnishing the farmer the instructions for mingling feeds, and telling what he should buy for the purpose of balancing the diet. For these things are a matter of investigation which any advanced class in a country school may do. They may keep records of the egg production of the various flocks, to the end that the best local strains may be known. They may record increases in weights of the different lots of animals being fed, that the best rations and the best conditions and the best breeds may be recognized. They may analyze every lot of seed brought into the neighborhood, for foul seeds and for vitality. They may test the seed corn of the neighborhood, ear by ear, or, if this seems impracticable, they may make and send out the cabinets for such testing at the homes. This work alone would add millions to the corn crop of any of our corn-growing states if it were universally carried out. They may test new vegetables and flowers. They may make garments for the homes. They may develop the art of cookery to the great satisfaction of the housewives. They may make war on flies and vermin. They may make the hookworm in our Southern states a thing of the past. Some schools may do all of these things now, and any school may do some of them. And as soon as this work starts, the social center is well on the way to flourishing birth, whether it is intended or not.

There are other and higher tasks to which the rural schools may address themselves as they gather strength by contact with truth-tasks beyond the power of the ordinary farmer to perform. One of the greatest of these is the task of keeping the farm accounts. Many will be surprised at the statement that no satisfactory system of farm accounts of a statistical nature has as yet been worked out. So many agricultural economists are now at work on this matter, however, that we shall soon have, I doubt not, as good a cost system for the

farm as we have for the factory. But it is certain that when the system is perfected it will be found too complex for the farmer to keep. A proper cost system for a farm is vastly more complex than the books of a bank. The farmer could not keep it if he knew how — it would take more time than he could give to it. But there seems to be no reason why the perfected rural school should not be able to keep the perfected accounts for the farm. It would constitute work of the highest educational value for the older pupils of the school. It would gradually accumulate a mass of facts as to the profits and losses in farming which would be of priceless value to economists now if accessible. It, in connection with the tasks I have mentioned, with soil analysis, and things generally which can be better done collectively than individually, will make the rural school the best business college in the world.

The rural school will thus become a farm laboratory and a domestic science school. As a continuation school in which the grown people as well as the children are enrolled — in fact if not in form — it will command the constant attention, and attract the intensest interest of every patron. New buildings will be required, better grounds, and a stronger teaching force; but these will be eagerly furnished when, in addition to giving to the children and young people a broad and practical education, the school's work will have a great, a growing, and a measurable money value. Such a school will be merged in the general society of its community, and cease to be a thing apart. The life of the school and the life of the farm will be one.

Nobody who has seen the uplift which has come to a considerable number of our rural communities through a correlation of rural school instruction with rural life can, I believe, condemn this picture as impossible. It is so far from being in the realm of the impossible as to be, in its beginnings, already in existence. Several of the states already require the teaching of agriculture and domestic economy in the rural schools. This teaching is in most schools very inadequate; but it is doing a great good

even in its imperfections. The elements of agricultural science are not more difficult than are other studies which have been from time to time imposed upon our unprepared teaching force; and such is the grip of real truth related to actual life that this teaching possesses a gratifying vitality already. In several school systems rural life and rural sentiment have been profoundly affected by the timid beginnings of the new kind of rural school. I have in mind the conditions in Page County, Iowa, as best known to me personally. In Barnes County, North Dakota, the social center seems already in promising growth from the rural schools, and is assuming the very significant form of economic coöperation — that greatest need of rural life. In parts of the South the schools are taking hold on the eternal verities of Mother Earth in a wonderful way. And all over the nation the school activities in corn, tomatoes, flowers, live stock, sewing, cooking, sanitation, debating, entertainments, picnics, and all the needful factors of a full social life are manifold and increasing. The social center which I now here suggest will inevitably grow from these seeds, if the schools take up their true work — that of making themselves the social and economic laboratories of their communities.

The dream to me is a wonderful one. It means the ennobling of the rural teacher, and the magnifying of his functions and emoluments. It means the coming into its own of that long-contemned office, the county superintendency of schools. It means more money for schools, and money expended with actual financial profit to the community. It means that the school work shall be in large part economically productive work. It means a school system on which the people will spend their money with the same sense of good business judgment which they now feel in building barns. It means a longer school life for the farm boys and girls, for the reason that their work will be necessary as well as educative. It means in every way a more contented, a more efficient, fuller rural life.

It will tend to arrest the drift of the rural population to the

cities. An incident in proof of this, and I am done. Years ago in Wright County, Iowa, 157 boys and 174 girls in rural schools were asked their plans for life. All but seven of the boys and all but eleven of the girls declared that they would have nothing to do with farming. During the next three years the teaching of agriculture and domestic science was introduced. Another vote was then taken in the same schools, with 174 boys and 178 girls voting. All but eleven of the boys and all but seventeen of the girls declared their intention of remaining on the farm.

This is a revolution in sentiment, and it means much. Once let these new schools complete their work of social regeneration and the drift will turn from the cities to the farm. We shall have opened to all eyes the attraction of rural life, as well as its material rewards; and out of the coöperative intercourse of the farmers of the nation will grow the new democracy which has been the dream of reformers and humanitarians.

CITY COMFORTS FOR COUNTRY TEACHERS¹

GEORGE E. VINCENT

"COME in, friends; never mind the mud; this is your house and we want you to see every room in it." It took imagination and civic spirit for Superintendent Fred Grafelman, of the Alberta, Minnesota, Consolidated Rural School, to issue that invitation. A smaller man would have hesitated. Four hundred people were standing in front of the new Teachers' House which had just been formally dedicated to the service of rural education. An almost unprecedented February thaw had produced a slimy ooze. Within were spotless floors of well-finished maple. The thought of the invasion was enough to make a good housekeeper shudder. But the Superintendent saw that something more vital than clean floors was at stake. These citizens and guests must not be made to feel that the building was a private house. They must from the outset think of it as a part of the public school itself. So in they flocked, with calamitous feet and glad hearts.

Civic pride was the dominant note of the dedication day. A joint reception committee from the Commercial Club and the Woman's Club welcomed at the station the visitors who came from a distance. The State Superintendent of Public Instruction journeyed from the capital. The State University sent a representative. Students and faculty from one of the University's substations and agricultural schools drove ten miles across country in bob-sleighs. Many friends and neighbors from outside the district joined in the festivities. Pupils

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and their parents raised to nearly 500 the number in attendance. Congratulations from the visitors were hearty and gratifying. Alberta was being "put on the map." The citizens of the district thrilled with a sense of collective achievement. It was a great day for Alberta, a hamlet of 30 families with a school registration of 132 pupils of whom 95 are brought daily in public conveyances from the surrounding countryside.

A noon dinner for guests and officials was served in the high and well-lighted basement which in the new Teachers' House is equipped for the domestic science work of the school. The Commercial Club paid for the excellent meal which was cooked and served by the schoolgirls. The speeches were brief and to the point. The president of the school board said he had never made an address before. He had something to say, said it clearly and sincerely, and sat down. The contractor merely rose and bowed, and asked the building to speak for him. If he had ever heard of Sir Christopher Wren he would have said "Circumspice." Three or four visitors offered congratulations. The best speech was made by the president of the Woman's Club. She was witty and clever, and at the end struck a true note of social idealism. One asked: "Who is *she*?" "Oh, a former school teacher; I see." Let not the cynical deride the "mob of mobile maidens meditating matrimony." Alberta is only one of thousands of American communities which are the better because women trained as school teachers have married and are living in them.

How so many people were packed into the two classrooms, which thrown together make the auditorium of the Alberta school building, it would be hard to say. First the grown-ups were stowed away; then the chinks were filled with children of assorted sizes. It was a happy, well-contented company, cheerfully absorbent of the amiable things the visitors said about the spirit and enterprise of the Alberta district. Fred Grafelman was praised for his enthusiasm, and his faith that the plan, at first regarded with suspicion, could be carried

through. The contractor was lauded as an honest man who had contented himself with day wages. The local merchant who supplied the furniture for the Teachers' House at wholesale prices without profit to himself was called a good citizen. The members of the school board were commended for their public spirit. Again the people were congratulated upon having given support to the project. To mitigate the speech-making two of the teachers played a piano duet; the school chorus sang. At the end the whole company joined in "America." One looking on might well ask: "Is not this community feeling the beginning of real patriotism? Must not the individual learn first to merge himself in his neighborhood, before he can identify himself with his nation?"

Then came the formal exercises in front of the new house. The audience was shepherded into place; the band from the agricultural school played; the state superintendent in a few words put the house at the service of the district and the state, declaring that Alberta had set an example to the nation. It was at this point that Fred Grafelman gave his courageous invitation, and the eager assembly flocked in to see how the teachers were living, and to create on an heroic scale a house-cleaning problem for the department of domestic science. An hour later, the six school sleighs loaded with pupils jingled off into the country; the neighbors from the countryside followed; the visitors from a distance were escorted by the reception committee to the five o'clock "local," and Alberta became to all appearances what it had been early that morning. But these appearances were misleading, for Alberta can never be quite what it was before it built and dedicated the Teachers' House.

How did Alberta happen to embark on this venture? Here is the story in brief. The General Education Board has long been interested in fostering rural education, notably in the South. It was suggested to the Board that the housing of rural teachers, especially when they are grouped in consolidated

schools, is pressing for solution, and that a few successful demonstrations of the results of providing at public expense suitable living quarters for groups of teachers would be of real service. It was decided to try the experiment. Minnesota was selected because consolidation is progressing rapidly there; moreover, the winter climate renders the housing question peculiarly important. Alberta was given an opportunity to coöperate, because the Board had heard about Fred Grafelman and his idea of making his school not only an educational institution adapted to the life and needs of the community, but a social center as well, with a literary club, a chorus, a debating society, motion-pictures, etc. The Board offered to pay one-half of the expense of building and equipping a teachers' house provided the district would supply the other half of the total cost.

This offer was made in the early spring of 1916. Mr. Grafelman set to work with his usual enthusiasm. A group at once gave him support. But obstacles were quickly encountered. In addition to the usual inertia of any community there was active opposition. Some people feared that there was "a string to the gift"; others were alarmed at an increase in the bonded indebtedness; still others declared that the maintenance of the house would be a burden; the persons who were boarding the teachers viewed with alarm a communistic invasion of vested rights. So the struggle continued. At last the Board voted to submit the question to the people. Then followed a campaign vigorous, and sometimes heated. Grafelman was several times in despair, but he kept on doggedly until finally the vote was taken. The bonds were authorized by a substantial majority. The house plans were rushed to completion; ground was broken early in October, 1916; the teachers moved into their new quarters during the first week of January, 1917.

The house stands on the school grounds about 100 feet from the school building. The high basement contains a large domes-

tic science laboratory equipped with a regular range, a model practice dining room appropriately furnished, a sewing room, a modern laundry, the furnace room, and a girls' toilet. The first floor is a complete, self-contained apartment for the superintendent and his family. The suite includes an entrance hall, alcove for hats and coats, living room, dining room, kitchen, three sleeping rooms and a complete bathroom. On the second floor, wholly independent of the rest of the house and with separate front and rear entrances, is the apartment for teachers, which contains a combination living and dining room, a kitchen, four double sleeping rooms and a bath. The third floor or attic with large dormer windows affords space for three more sleeping rooms. The house is well heated — weather 35 degrees below zero and a sixty-mile wind tested this in January — by a hot-water furnace, and lighted by electricity which is supplied by the local plant, a gasoline engine and dynamo set up in the rear of the village hardware store. The water supply comes from the driven well and pressure tank of the school building. The total cost of house and fittings was about \$7500, which came from the following sources: district \$3000, state \$500, General Education Board \$3500; architect's fees, merchants' profits contributed, etc., \$500.

The finances of the house are naturally of interest. The total income of the school board from the superintendent, who pays \$240 rent, and from the teachers, each of whom pays \$7 a month for nine months for her room, is \$555. Out of this the board must pay for coal, extra janitor service, insurance, repairs, etc., meet 5 per cent interest on \$3000 of bonds, and if possible amortize the district's indebtedness. The board now estimates that \$200 will be available annually for this purpose.

What about the cost to teachers? During the campaign it was predicted that they would have to pay \$30 per month, instead of the \$22 or \$25 which it was then costing them. Let us see how the plan is working out. The five teachers are living

coöperatively with the teacher of domestic science in charge. A graduate of the school is employed as a maid. She performs the housework, helps with the cooking, and does the general washing. Her wages are \$4.50 per week, with room and board. In addition, for 15 cents a dozen, she washes and rough dries the personal laundry of the teachers, who do the ironing for themselves. The total cost for the household for February was as follows:

Supplies (food, oil, fuel, etc.)	\$40.55
Maid's wages	18.00
Electricity	1.00
Laundry	3.00
Rent	35.00
	<hr/>
	\$97.55

Equally divided among the five teachers, this makes the expense of each for four weeks, \$19.51. It should be explained that the stove in the domestic science department is available for baking, roasting, etc. An oil range is used in the teachers' kitchen. The cost of oil fuel is included in the total for supplies.

The teachers, two of them university graduates, three with normal school training, are delighted with their new living conditions. They say that they are conscious of doing their daily school work much better. Their attitude toward country teaching has been radically modified. On the open prairie they enjoy all the physical comforts and conveniences of the city. They form a congenial group. "It's like living in a sorority house," said one of them. This, after all, is the real test of the plan. Will the House make it easier to secure and to hold the best type of teacher? Why, pray, should well-trained, self-respecting young women be asked to make sacrifices in order to teach in rural schools, when such sacrifices are wholly unnecessary?

The Teachers' House is usefully related to the school work

in domestic science. The girls of the advanced class have access at times to the teachers' apartment, which serves as a model of domestic arrangements. The cookery in the school classes is much of it done on a family scale with a regular stove. Only a part takes the form of miniature exercises carried out on oil stoves. While the teachers do not agree to purchase the whole output of the classes, as a matter of fact a large part it is bought for the coöperative table upstairs. This plan reimburses the school supply fund, and gives the young cooks a sense of actuality in their work. Future plans include a school garden and summer canning classes, the product to be purchased for the teachers' table.

The fact that the whole school staff is living at the school gives the institution a more vividly local character, and dignifies it in the eyes of young and old. The "suitcase" rural teacher who arrives from a neighboring town reluctantly at the last moment Monday morning, and escapes eagerly at the earliest opportunity Friday afternoon, is ordinarily not to be blamed. At the same time her attitude does not suggest a fondness for country life. She turns her pupils' thoughts toward town as a more desirable place. A group of resident teachers, on the other hand, living contentedly in the community and sharing its interests fosters local self-respect and contributes to civic loyalty. Thus the Teachers' House not only helps the school; it affects favorably the entire district. It becomes a source of suggestion to the people of the community, especially to the women. They see the possibilities of introducing conveniences into their own houses; they learn that simple, sincere, tasteful furniture and decorations are to be preferred to machine carving, plush upholstery, and "hand paintings."

It should be understood that the public provision of housing for teachers is no new thing. Germany and France, Denmark and, to some extent, Norway and Sweden have long furnished dwellings for village and rural teachers. Nor is the plan wholly novel in the United States. Bungalows and cottages for two,

three, or four teachers are common in the state of Washington and in California. North Dakota has a large number. St. Louis County, Minnesota, provides separate cottages and in some cases combines in one building schoolrooms and living quarters for two or three teachers. In many states there are isolated experiments. Sometimes old school buildings are remodeled for this purpose. Again, a school board will rent a dwelling and sublet it to teachers. A privately financed teachers' house in an Illinois village is said to pay 8 per cent on the investment. Most of these housing provisions, however, are made in connection with rural schools either of the one-room type or of the small, graded sort. The Alberta house is significant for its city-apartment character, its proximity to the school, its close relation to the school work, its completely official nature, its social as well as educational value.

The speakers who at the Alberta dedication insisted that the day had national importance were not merely flattering local pride. They meant that rural education is of vital concern to the country as a whole. If the countryside is to be saved from tenancy and its consequences, is to be a source whence able individuals may be drawn into the service of all, rural education must be put upon a level with urban training. The conditions of good education are: competent, loyal teachers, expert supervision, proper housing, and modern equipment. Consolidation of rural schools is solving for the country the last two problems; the second is being urged with some success. Many factors will contribute to the solution of the first. Among these the teachers' house must be reckoned next to professional training and adequate salaries. The dedication at Alberta was of national significance. Within a few years the teachers' house will be included as a matter of course in the bond issue for consolidated rural school plants.

It may be well to add that the General Education Board has no thought of making offers to a large number of districts. Arrangements have been made with two other schools. Bulle-

tins containing house plans, financial statements, reports upon various phases of the experiments, will in due time be published in large editions and given wide distribution. The Board will rest content with making available for School Boards and the public trustworthy data concerning the operation of a few teachers' houses in connection with typical consolidated rural schools.

THE RURAL CHURCH THE CENTER OF THE RURAL COMMUNITY¹

WOODROW WILSON

I **FEEL** an unaffected diffidence in coming into this conference without having participated in its deliberations. I wish that I might have been here to learn the many things that I am sure have been learned by those who attended these conferences. I feel confident that nothing that I say about the rural church will be new to you. I want you to understand that I am here simply because I wanted to show my profound interest in the subject which you have been considering and not because I thought I had anything original to contribute to your thought.

But I think, as we have witnessed the processes of our civilization in recent years, we have more and more realized how our cities are tending to draw the vitality from the countryside; how much less our life centered upon the country districts; how much upon more crowded cities. There was a time when America was characteristically rural; when practically all her strength was drawn from quiet countrysides, where life ran upon established lines and where men and women and children were familiar with each other in a long-established neighborliness. But our districts are not now just what they used to be, and have partaken in recent years something of the fluidity that has characterized our general life, so that we have again and again been called upon, from one point of view or another, to study the revitalization of the countryside.

There was a time no longer ago than the youth of my own

¹ An address delivered before the annual meeting of the Federal Council of the Churches of Christ in America, at Columbus, Ohio, December 10, 1915.

father, for example, when pastors found some of their most vital work in country churches. I remember my dear father used to ride from church to church in a thickly populated country region and minister to several churches with a sense of ministering to the most vital interests of the part of the country in which he lived.

And after all, the most vitalizing thing in the world is Christianity.

The world has advanced, advanced in what we regard as real civilization, not by material, but by spiritual means. And one nation is distinguished from another by its ideals, not by its possessions; by what it believes in, by what it lives by, by what it intends, by the visions which its young men dream and the achievements which its men of maturity attempt. So that each nation exalts, when it writes its poetry, or writes its memoirs, the character of its people and of those who spring from the loins of its people.

There is an old antithesis on which I do not care to dwell because there is not a great deal to be got from dwelling on it, between life and doctrine. There is no real antithesis; a man lives as he believes he ought to live or as he believes that it is of advantage to live. He lives upon a doctrine — upon a principle — upon an idea; sometimes a very low principle, sometimes a very exalted principle.

I used to be told when I was a youth that some of the old casuists reduced all sin to egotism. And I have thought as I have watched the career of some individuals that the analysis had some vital point to it.

An egotist is a man who has got the whole perspective of life wrong. He conceives of himself as the center of affairs; he conceives of himself as the center of affairs even as affects the providence of God. He has not related himself to the great forces which dominate him with the rest of us, and therefore has set up a little kingdom all his own in which he reigns with unhonored sovereignty.

And so there are some men who set up the principle of individual advantage as the principle, the doctrine of their life, and live generally a life that leads to all sorts of shipwreck. Whatever our doctrine be, our life is conformed to it, but what I want to speak of is not the contrast between doctrine and life, but the translation of doctrine into life.

After all Christianity is not important to us because it is a body of conceptions regarding man and God, but because it is a vital body of conceptions which can be translated into life for us; life in this world and a life still greater in the next.

And except as Christianity changes and inspires life, it has failed of its mission. That is what Christ came into the world for, to save our spirits, and you cannot have your spirit altered without having your life altered.

When I think of the rural church, therefore, I wonder how far the rural church is vitalizing the lives of the community in which it exists. We have had a great deal to say recently, and it has been very profitably said, about the school as a social center, by which is meant the schoolhouse as a social center; about making the house which, in the daytime, is used for the children, a place which their parents may use in the evenings and at other disengaged times for the meetings of the community, where the people are privileged to come together and talk about anything that is of community interest, and talk about it with the utmost freedom.

Some people have been opposed to it because there are some things that they do not want talked about. Some boards of education have been opposed to it because they realized that it might not be well for the board of education to be talked about. Talk is a very dangerous thing. Community comparisons of views are a very dangerous thing to the men who are doing the wrong thing. But I, for my part, believe in making the school the social center, the place that the community can use for any kind of coördinating that it wants to do in its life.

But I believe that where the schoolhouse is inadequate,

and even where it is adequate, the most vital social center should be the church itself. And that, not by way of organizing the church, the social church. That is not my topic to-night. That is another topic; but of making the community realize that the congregation, and particularly that the pastor, is interested in everything that is important for that community, and that the members of that church are ready to coördinate and the pastor ready to lend his time and his energy to the amount of organization which is necessary outside the church as well as in, for the benefit of the community.

It seems to me that the country pastor has an unparalleled opportunity to be a county leader, to make everybody realize that he, as the representative of Christ, believes himself related to everything human, to everything human that has as its object the uplift and construction and inspiration of the community for the betterment of any of its conditions. And that if any pastor will make it *felt* throughout the community that this is his spirit and that this is his interest, and that he is ready to draw his elders and his deacons and his vestrymen with him as active agents in the betterment of the community, the church will begin to have a dominating influence in the community such as it has lost for the time being and which we must find means to regain.

For example, in a farming community one of the things that the Department of Agriculture at Washington is trying to do is to show the farmers of the country the easiest and best methods of coöperation with regard to marketing their crops; learning how to handle their crops in a coöperative fashion, so that they can get the best service from the railroads, learn how to find the prevailing market prices in the accessible markets, so as to know where it will be best and most profitable to send their farm products; and draw themselves together into co-operative associations with these objects in view.

The church ought to lend its hand to that. The pastor ought to say, "If you want somebody to look after this for you, I

will give part of my time and I will find other men in my congregation who will help you and without charging you anything for it. We want you to realize that this church is interested in the lives of the people of this country, and that it will lend itself to any legitimate project that advances the life and interests of the people of this country."

Let the rural church find that and then discover, as it will discover, that men begin to swing their thoughts to those deeper meanings of the church to which we wish to draw their attention, that this is a spiritual brotherhood, that the pastor and associates are interested in them, because they are interested in the souls of men and the prosperity of men as it lies deep in their heart. There are a great many ways by which leadership can be exercised.

The church has too much depended upon individual example. "So let your light shine before men" has been taken to be "put your individual self on a candlestick and shine." Now the trouble is that some people cannot find the candlestick, but the greater trouble is that they are a very poor candle and the light is very dim, and it does not dispel much of the darkness for me individually to sit on the top of a candlestick. But if I lend such little contribution of spiritual forces as I have to my neighbor and to my comrade and to my friend, and we can draw a circle of friends together and unite our spiritual forces, then we have something more than example. We have coöperation, and coöperation, ladies and gentlemen, is the vital principle of social life.

I think I know something about organization. I can make an organization, but it is one thing to have an organization and another thing to fill it with life. And then it is a very important matter what sort of life to fill it with. If the object of the organization is what the object of some business organizations is, and the object of many political organizations is, to absorb the life of the community and run the community for its own benefit, then there is nothing profitable in it. But

if the object of the community is to afford a mechanism by which the whole community can coöperatively use its life, then there is a great deal in it, and organization without the spirit of coöperation is dead and may be dangerous. So that the vital principle is coöperation, and organization is secondary.

I have been a member of one or two churches that were admirably organized and were accomplishing nothing. You know some people dearly love organization. They dearly love to sit in a church and preside. They pride themselves upon their knowledge of parliamentary practice. They love to congregate and write minutes. They love to appoint committees. They boast of the number of committees that their organization has and they like the power and the social influence of distributing their friends among the committees. And then, when the committees are formed, there is nothing to commit to them.

This is a nation which loves to go through the motion of public meetings, whether there is anything particularly important to consider or not. It is an interesting thing to me how the American is born knowing how to conduct a public meeting.

I remember that when I was a lad I belonged to an organization which seemed to be very important, and which was known as "The Lightfoot Baseball Club." Our clubroom was an unoccupied corner of the loft in my father's barn, the part that the hay did not encroach upon. And I distinctly remember how we used to conduct orderly meetings of the club in that corner of the loft. I had never seen a public meeting, and I do not believe any of the other lads, with whom I was associated, had ever seen a public meeting. But we somehow knew how to conduct one. We knew how to make motions and second them. We knew that a motion could not have more than two amendments offered at the same time, and we knew the order in which the amendments had to be put, the second amendment before the first. How we knew it I do not know. We were born that way, I guess.

But nothing very important happened with the Lightfoot Baseball Club, and I remember distinctly that my delight and interest was in the meetings, not what they were for, but just the sense of belonging to an organization, and doing something with the organization, it didn't very much matter what. Some churches are organized that way. They are exceedingly active about nothing.

Now, why not lend that organization instinct, that acting instinct, to the real things that are happening in the community, whether they have anything to do with the church or not?

We look back to the time of the early settlement of this country and remember that in New England the church and the school were the two sources of life of the community. Everything centered in them; everything emanated from them. The school fed the church and the church ran the community. It sometimes did not run it very liberally, and I, for my part, would not wish to see any church run any community, but I do wish to see every church assist the community in which it is established to run itself to show that the spirit of Christianity is the spirit of assistance, of counsel, of vitalization, of intensive effort in everything that affects the lives of men, women and children.

So I am hoping that the outcome of this conference and all that we say and do about this important matter may be to remind the church that it is put into this world not only to save the individual soul, but to save society also, and it has got to go to work in society, in one sense with a greater sense of the exigency of the thing than in the case of the individual, because you have got to save society in this world, not in the next.

I hope that our society isn't going to exist in the next. It needs amendment in several particulars, I venture to say, and I hope that the society in the next world will be amended in those particulars, which I will not mention. But we have nothing to do with society in the next world. We may have

something to do with the individual soul in the next world by getting it started for the next world, but we have nothing to do with the organization of society in the next world.

We have got to save society, so far as it is saved, by the instrumentality of Christianity in this world. It is a job, therefore, we have got to undertake immediately and work out all the time, and it is the business of the church.

Legislation cannot save society. Legislation cannot even rectify society. A law that will work is merely the summing up in legislative form of the moral judgment that the community has already reached.

Law records how far society has advanced and there have to be instrumentalities preceding a law that advanced society up to that point where it is ready to record. Try the experiment of enacting a law that is the moral judgment of a very small minority of the community, and it won't work. Most people won't understand it, and if they understand it, they will resent it, but whether they understand it and resent it or not, they won't obey it.

Law is a record of achievement; it is not a process of regeneration. Our wills have to be regenerated and our purposes rectified before we are in a position to enact laws that record those moral achievements; and that is the business primarily, it seems to me, of the Christian.

There are a great many arguments about Christianity. There are a great many things which we freely assert which we can't, in the ordinary scientific sense of the word, prove; but there are some things which we can show. The proof of Christianity is written in the biography of the saints — and by the saints I do not mean the technical saints — those whom the church or the world have picked out and labeled saints — for they are not very numerous — but the people whose lives — whose individual lives have been transformed by Christianity.

It is the only force in the world that I have ever heard of that does actually transform life. And the proof of that trans-

formation is to be found all over the Christian world, and is multiplied and repeated as Christianity gains fresh territory in the heathen world. Men begin suddenly to erect great spiritual standards over the little personal standards which they heretofore professed, and will walk smiling to the stake in order that their soul may be true to themselves. There isn't anything else that does that.

There is something that is analogous to it, and that is patriotism. Men will go into the fire of battle and freely give their lives for something greater than themselves — their duty to their country — and there is a pretty fine analogy between patriotism and Christianity. It is the devotion of the spirit to something greater and nobler than itself.

These are the transforming influences. All the transforming influences of the world are unselfish. There isn't a single selfish force in the world that isn't touched with sinister power, and the church is the only embodiment of the things that are entirely unselfish, the principles of self-sacrifice and devotion.

Surely this is the instrumentality by which rural communities may be transformed and led to the things that are great; and surely there is nothing in the rural community in which the rural church ought not to be the leader and in which it ought not to be the vital actual center.

That is the simple message that I came to utter to-night, and as I began by saying, I dare say it is no message; I dare say it has been repeatedly said in this conference. I merely wanted to add my testimony to the validity and fire of that conception, because we are in the world to do something more than look out for ourselves.

The reason that I am proud to be an American is because America was given birth to by such conceptions as these; that its object in the world, its only reason for existence as a government, was to show men the paths of liberty and of mutual serviceability, to lift the common man out of the paths, out of the slough of discouragement, even despair, and set his

feet upon firm ground; tell him here is the high road upon which you are as much entitled to walk as we are, and we will see that there is a free field and no favor, and that as your moral qualities and your physical powers are, so will your success be. We won't let any man make you afraid, and we won't let any man do you an injustice.

Those are the ideals of America. We have not always lived up to them, no community has always lived up to them; but we are dignified by the fact that those are the things that we live by and swear by.

And America is great in the world, not as she is a successful government merely, but as she is a successful embodiment of a great ideal of unselfish citizenship.

That is what makes the world feel America draw it like a lodestone; that is the reason that the ships that cross the sea have so many hopeful eyes lifted from their humbler quarters toward the shores of the new world; that is the reason why men, after they have been for a little while in America and go back for a visit to the old country, have a new light in their faces, the light that is kindled there in the country where they have seen some of their hopes fulfilled — that is the light that shines from America.

God grant that it may always shine and that in many a humble heart in quiet country churches the flames may be lighted by which this great light is kept alive.

FARM COÖPERATION FOR BETTER BUSINESS, SCHOOLS, AND CHURCHES¹

WARREN H. WILSON

THE need of better business management is at the root of the troubles of the country church and school. Social surveys made in the past three years have all led the investigator back of small salaries for ministers and poor pay for teachers to the meager income of the farmer. The reason for the farmer's poor return for his labor is a very simple one. He does not manage his business well.

As a result of serious study of the rural problem in the past five years, the dictum of the Country Life Commission that better "business" is needed in the country has been confirmed. The farmer's occupation is the only one now pursued in all rural regions. Workers in other economic processes have deserted the open country and assembled themselves in the big towns and the cities. Even in the villages there are very few factories.

The Ohio rural life survey discovered in the villages of less than 2500 population so few factories or other industrial organizations as to confirm the census definition of these villages as "rural." Workers in iron, workers in wood, manufacturers of farm products, of farm machinery, and the workers in nearly all the trades that once were distributed throughout the open country are now at work away from the farm in the cities big and little. So that the tiller of the soil who works with land, vegetables, and animals is the only economic type to be discovered everywhere in the open country.

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The general impression is that farmers in the Middle West are prospering. If social institutions are signs of prosperity, this impression is a mistake. The general aspect of the Middle West is that of universal improvement of the means of agricultural production, along with general neglect of social improvement. Productive improvements which may be purchased with borrowed money, such as machinery, drainage of land, pure-bred cattle, are everywhere, and the automobile stands in the farmer's garage; but churches and schools, which may be paid for only out of income, are unimproved.

In such states as Illinois and Iowa, according to high authority, the farmers are not getting an income equal to 5 per cent of their invested capital. For their labor they have no pay. In newer states of the Middle West, if depreciation of the producing power of the soil is reckoned, it is evident that the income of the farmer is secured by waste of the soil. Spurious prosperity in the country which will not support social institutions is of this sort; the price of the land is rising while its value as a producing property is falling. It will sell for more, but it produces less. Social institutions in the country are undermined by such a condition. Churches and schools and other social institutions are built of bushels and tons rather than of dollars. They can be purchased only out of income, and the income that guarantees social institutions in the country is pay for labor. Wherever the farmer gets no pay for his work, even though as a capitalist he gets interest on his investment, social institutions in the country are weak, and this is the general condition throughout the Middle West.

Farming is a coöperative occupation. The poet Hesiod, centuries before Christ, so described it. For this purpose men are dependent upon one another. Its markets are one. The prices paid to the farmer and demanded of the farmer are uniform. But the business of farming has in America been individualized. This is partly due to the cabin and the homestead, which made men lonely, self-reliant, and suspicious,

but the effect of it has been to impoverish and weaken the farmer.

His methods of tilling the soil are old-fashioned, yet he buys and sells in the open market as a competitor of vast corporate enterprises. His head, with which he thinks, is in a cabin; his hands are the hands of a homesteader; but his feet stand in the open market among the trusts and corporations. Obviously, coöperative organization of farmers is a needed reform.

The desire for coöperation is not merely economic. School men in the country are urging the consolidation of schools and their centralization at convenient foci of larger districts. Church men, on behalf of the country church, are pleading for federation. The movement is one; but the serious student of country conditions realizes that at bottom the trouble in the country is economic. Until the farmer coöperates in getting a daily living he will never coöperate in the higher life. Educational union is forbidden by economic competition and disunion. Men could not sincerely federate in the quest of food for the soul, who are competitors in the quest of daily bread. While no one believes that economic coöperation will result automatically in the consolidation of schools or the federation of churches, it is pretty plain that the organization of the schools and the churches cannot come until economic coöperation trains the people in the ways of collective action.

This need is illustrated and enforced in a startling manner by studies made in New York state under the direction of Cornell University by Professors Warren and Livermore. The book on Farm Management recently published by Prof. F. G. Warren presents in its first chapter all we know about the income of the American farmer. In a favored county in New York the average income of farmers is \$423. An income of corresponding size in the industrial centers of New York state would be about \$700, or less than the standard of living needed by a mechanic in those cities. Similar studies are being made in other states, but the result is such as to show that the average farmer has less than

a living wage, even in the present prosperous days. What shall we say of his poverty during the past two decades?

Professor Warren in a recent public discussion estimated the income which farmers in New York state could pay to their minister as \$500 per year and a house. This income is recognized by clergymen as insufficient for the support of a minister's family in the open country. Professor Warren insisted that the only way by which a minister might earn a larger income out of the contributions of farmers of average generosity — themselves receiving the average income — would be by greatly enlarging his parish bounds and taking in a wider circle to his ministry than is included in the present parish of the average church. In other words, the present country community is incapable of supporting adequately the usual social institutions. The lack of an income adequate for social organization is the leading argument for coöperation in the country.

Coöperation is at this time more than a pious wish. The book by Professor John Lee Coulter, *Farm Coöperation*, contains the story of the battle, for years a losing fight, which American farmers have fought in order to be recognized in the market. The trouble with farming in America is that the countryman has nothing to say as to the price of his goods. He produces and sells as a rule perishable goods on which there is no time to dicker. Grain brought to market, fat cattle, tobacco, milk, garden produce — are all perishable to such a degree that as a rule the seller of them must make terms with the first purchaser. He has no margin of security or assurance in which to ask for a larger price. The result is that farmers since 1890, without the assistance of any central agency, yet under the pressure of common experience, have been organizing persistently in a common direction.

Grain farmers in the Middle West have organized their grain elevators and compelled the railroad by legislative action to serve them with tracks and with cars. Farmers on the Eastern Shore have wrought out the problem of the produce exchange by

which they market the produce of their truck farms in near-by cities at good advantage. Kentucky farmers, through their associations, have learned how to sell their tobacco to advantage, and have lifted themselves from a condition of practical slavery into one of independence and power. Fruit farmers on the Pacific coast only by coöperation have been able to deliver their citrus fruits and their apples in the eastern market at the highest prices. Many other instances might be cited, but these are representative. The story told by Professor Coulter is one of the most heartening and encouraging in American rural history.

It is a significant thing that Sir Horace Plunkett, an American landlord and Irish patriot, dates from 1890 the beginning of the present agrarian movement in America, and J. B. Ross of Lafayette, Indiana, a profound student of American country life, places in the same year the beginning of the present era in American country life.

The present secretary of agriculture at Washington has introduced into the department a new Bureau of Marketing, of which Professor Thomas Nixon Carver of Harvard was the organizer. This bureau undertakes the investigation of coöperative methods and the publication of reliable information on the subject. This departure is revolutionary. Under the former secretary, every creature on the farm was studied except the farmer. It is important to know about plants, trees, and hogs, and their diseases — weevils, scales, and insect pests. But the central interest of agriculture is human; and the motive of the farmer is to get an income.

The farmer's income will be increased through coöperation in the conquest by the farmer of three great processes belonging to his occupation, but now in the possession of others than farmers. The low income of the farmer is explained by the fact that he does not manufacture his goods, and the profit is in the manufacture. Others handle farm credit and farm loans, and the interest on his deposits is very small. The interest on his

borrowings is very large. His low income is explained further by the extraordinary number of middlemen who handle the goods which he produces. The paradox of the producer being impoverished while the consumers are supplied is explained by the fact that the exchange of the farmer's goods is in the hands of other men. So that the process of manufacture, of credit and of exchange, are three great fields for farm coöperation. When these are in the hands of farmers, the income of the farmer will be secure and his position in the country will be what once it was, that of the leading American economic type.

How can farmers expect to have a good income from milk unless they have some say as to the price of dairy products? No farm population except those in the favored lands are getting good pay in the dairy business. The manufacture of milk into butter and cheese promises to give to the farmer the possibility of dickering about his goods; for these products can be retained until the day of a better price, but milk must be sold the same day it is produced. European farmers get a good income by manufacturing their pork into bacon, and they own the bacon factory. American farmers sell fat hogs. Thus they lose the manufacturer's product and they never possess the right to dicker, which gives them an advantage in the market. Just so far as possible, farmers ought to manufacture the goods they produce, and the factories should be owned by the tillers of the soil. The only method by which this is possible is farm coöperation.

Farm credit is in some ways the best credit in the world. The present investment of capital in very large amounts in the farm lands of the Middle West under conditions which forbid any but a very low rate of interest, indicates that capitalists regard farm land as a good, safe investment. Yet the farmer who must borrow money on this land has to pay in average instances throughout the United States $8\frac{1}{2}$ per cent on his loans. He has, moreover, no facilities for securing short loans to tide him

over a crisis or to make a crop. City investors are content to get 3 or $3\frac{1}{2}$ per cent on the farms they own, but the owners of those farms must pay more than twice that amount for farm loans.

European farmers, and in a very few instances American farmers, have bridged this difficulty by loaning farm money to farmers in banks owned by the farmers, the depositors being paid about 3 per cent and the borrower being required to pay about $3\frac{1}{2}$ per cent. On the difference between these two the bank is able to live, provided it be a rural bank owned and operated by the people who deposit and who borrow. This means coöperative credit. The story of European credit is soon to be written in American terms.

In order to eliminate the middleman a great many American farmers are experimenting in the coöperative sale of farm products and not a few in the coöperative purchase of farm necessities. Frequently the prosperity of the country merchant arouses the envy of the farmer, but it is probable that the coöperative store should be the last instead of the first institution to be established by the farmer for handling his own business. Methods of sale of farm products are many, and notable among them is the coöperative grain elevator in the Middle West. Such articles as grain must be sold as they are produced. The market demands them in the raw. In these instances a coöperative selling organization is necessary.

Another of the leading forms is a town market conducted as a rule not by the farmers but by the municipality or under its protection. Such markets are a form of coöperation by which the consumers meet the producers face to face, getting rid thus of the long string of middlemen who struggle and compete between the farmer in the country and the salaried man in the city. In Des Moines, Iowa, the establishment of a town market around the city hall lowered the price of farm products to the city consumer in one week from 25 to 50 per cent. The farmers who sold thus at first hand secured a corresponding increase over former prices.

The farmer is not a stingier man than other Americans. If he has the money he will support social institutions as well as townsmen do. It is the hope of school men and church men who are profoundly concerned to-day, because of the decadent country church and the neglected, backward country school, that good business management in the country will, by bringing the farmer a better income, make possible social improvement which now, whatever his disposition, is impossible. The farmer himself has one answer to all such proposals of social improvement — "I cannot afford it." So that the first great argument for coöperation is that by giving the farmer a better income it will make social improvement possible. But a bigger argument is to be had in the very nature of coöperation itself. For it is an ethical process and undoubtedly moral gains of the highest value will be secured when farmers act together in manufacture; in handling their credit, and in the exchange of their products.

There are three principles essential to all rural coöperation without which it cannot proceed. Urban forms of organization do not thrive in the country. The joint stock corporation is not a success among farmers. The first principle of rural coöperation is of strikingly democratic character. In some form or other combinations of farmers which become permanent have as a part of their organization this principle — "One man one vote." Joint stock organizations work on the principle "for every share one vote" — but farmers cannot so combine. Both in America and in Europe the principle of equality in voting power is shown to be essential. Some American companies recognize this principle in part, requiring that no member of the coöperative union can have more than two or three or five votes, thus approaching a "one man one vote" principle, but in some form or other this principle is essential to all successful rural unions.

Second, farm coöperation is not for the purpose of dividends but for higher prices. Since it is a union in the interest of those

who produce and owned by them for their own good, the simplest method to distribute its benefits is in higher prices. So that the second principle of rural coöperation is, that if the co-operative union have any profit to be distributed it shall be distributed, as prices are, according to the quantity of business done. Each person bringing milk, or bringing pork, or bringing grain, shall be paid a share of the profit according to the quantities he brings to the union.

The third principle, not so easily described, has to do with liability. In some form or other coöperative unions are underwritten by the individuals entering into the union. Each man must make himself liable for debts and for obligations of the union, and frequently the tendency is to approach unlimited liability more nearly than joint stock organization does. Among the very poor farmers of Ireland, unlimited liability is possible. The Raiffeissen banks are of this type and they have been of extraordinary value in lending money to a depressed people, so poor that they are willing to underwrite the debts of the coöperative credit association, through which alone they can borrow money. By this method of securing credit, countrymen who could not borrow \$10 anywhere are able, through underwriting the debts of an association formed by them, to borrow on their collective credit an amount that not all of them acting independently could secure in fractional parts. This money they are able to lend for described uses to one another, and by this means improvements are made possible that without it could never even be attempted.

There is a fourth principle in coöperation, namely the co-operative spirit, and here the church and the school are mighty factors. For, as I said before, the spirit which is longing for church federation and school consolidation is the same moving spirit that hopes for the economic organization of farmers. The church must put its sanction upon the obligation of a farmer to his neighbors. It must condemn the old individual competitive spirit. It must teach the virtues of obedience, sub-

ordination, the obligations of leadership, the control of honor, truthfulness, loyalty to verbal contracts and the nobility of self-sacrifice in the interest of the community. This coöperative spirit is the ethical form of the whole process. Coöperation is not merely for the sake of making money, but it has to do with the conscience; it is a form of discipline for the will.

I believe, therefore, that the future of the country church and the possibility of developing a system of rural schools adequate to the needs of the American people are dependent upon coöperative organization of the farmer. By this means an income will be secured adequate to the support of social institutions, and by the same means a spirit will be cultivated by which a new rural civilization will be made possible.

THE FEDERAL FARM-LOAN ACT¹

ROBERT J. BULKLEY

THE American farmer has had a harder time to get credit and has had to pay more interest on his loans than the American business man or the European farmer. This is not altogether due to his inability to give good security, nor to any doubt about his ultimate ability to pay his debts, but is principally because he has wanted the use of money for longer periods than the commercial banks like to lend it and because rural credits have not been organized in such a way as to suit the convenience of the long-time investor, or to provide adequately for the safety of his investment. This condition has been recognized for several years and diligent efforts have been made to provide a remedy.

I

Conditions are unsatisfactory in respect to both land-mortgage, long-term, and personal short-term credit, but the former is generally conceded to be the more fundamental and important problem. Notwithstanding all difficulties, the farmer has succeeded in getting a good deal of money on mortgage security. The total is estimated at more than $3\frac{1}{2}$ billion dollars. Much of this amount is loaned at reasonable rates, but in many sections interest is unreasonably and unnecessarily high, and, for the most part, the loans are made for relatively short terms — three to five years.

This condition is shown by the study which was made of the subject for the Department of Agriculture under the direction

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of Mr. C. W. Thompson. Mr. Thompson sent a set of questions to five representative farmers in each county of the United States, another to the country banks, another to agricultural agents, and still another to the thirty thousand local crop correspondents who report regularly to the Bureau of Crop Estimates in the Department of Agriculture. The replies were grouped geographically and the results were tabulated to show the average interest rates and the average commission paid on farm mortgages in the different sections of each state in the Union.

Only in New York, New Jersey, and Pennsylvania does the average interest rate fall close to 6 per cent, and the commission makes the average total cost of loans from one half of 1 per cent to 1 per cent higher. Interest rates on farm mortgages are generally somewhat more than 6 per cent in Delaware, Maryland, Virginia, West Virginia, and North Carolina. Even in New England, where capital is abundant, farm-loan rates average over 6 per cent. The averages are from 6 to 8 per cent in Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, and Kentucky; and from 8 to 10 per cent, with a few districts reporting as high as 11 and a fraction, in Nebraska, Kansas, and South Dakota in the Middle West, in South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, and Louisiana in the South, and in Washington, Oregon, California, Arizona, and Utah in the Far West. Most of the farm-mortgage rates in Texas are more than 10 per cent, and this is true also in North Dakota, Montana, Idaho, Wyoming, Colorado, and New Mexico. In Oklahoma the conditions reported were the worst of all, not a single section of the state reporting as low an average rate as 10 per cent and one section averaging as high as 14½ per cent. In some parts of Oklahoma the addition of commission charges to the interest rate brings the total cost to the farmer above 19 per cent. This figure being an average for a considerable part of the state, it follows that there must be many cases in which the cost is even more exorbitant.

Very little of the farm-mortgage business is done on the amortization plan, and some of the institutions operating on that plan compel the repayment of principal in rather too short a time. As the amortization-plan business is an insignificant part of the whole, renewals are necessarily frequent, with the attendant commission charges and other costs. It is obvious that notwithstanding the fact that large amounts are already loaned on farm mortgages and that many cases can be cited in which the interest charges are not unreasonable, there is nevertheless a big national problem to be solved in improving and extending agricultural land-mortgage credit.

It is a problem in which the nation is even more vitally interested than the farmer himself, for availability of funds at reasonable rates is an encouragement to the farmer to improve his lands and so increase his yield of foods. The farmer's temptation to "rob the soil" which might be another's after the old-fashioned three-year or five-year mortgage should fall due does not exist under the long-term, non-callable, amortization-plan mortgage which gives the farmer a satisfactory sense of permanence in his land ownership and makes him the most interested and diligent conservator of his soil. Such a change in attitude interests and benefits us all, for it is certain to increase our national agricultural productiveness.

But improvement of farm lands and increase of food supply are not the only important changes which may be brought about by improved rural credits. We may also expect that better credit facilities will increase the number of independent home-owners working their own lands and reduce the number, or at least reduce the proportion, of tenants laboring on the lands of absentee landlords. This would surely represent an advance, for in this country of ours there is already enough absentee landlordism on the farm to give us very serious cause for apprehension. We may hope, too, that improvement in rural credits will tend noticeably to check the drift of population to great cities, which, it is generally recognized, has gone too far for the good of the country.

THE FEDERAL FARM-LOAN ACT

A great national problem is involved in increasing the nation's food supply and in improving the character of the nation's citizenship by diffusion of ownership in land. Because of these distinctively national underlying purposes the development of land-mortgage credit must as a matter of general policy be accomplished through national legislation. And from a technical point of view the problem is national, because the greatest possible mobilization of mortgages on lands of diverse character and subject to diverse conditions, together with the strongest possible securities and guaranties, will bring the lowest interest rate for capital and the best security for the investor; and only a national system can afford such adequate mobilization and such strong security. All political parties, practically all members of both Houses of Congress, and practically all students of the question agree that a national land-mortgage system had to be developed and established by Congress and Congress has finally established such a system. A brief recital of the steps leading up to this action may be of interest.

II

•The subject of rural credits was mentioned in the platforms of all the great political parties in 1912, and each pledged itself to action for the betterment of credit facilities on the farm. The Democratic platform declared that the question is "of equal importance with the question of currency reform." The Republican platform contained substantially the same declaration: "It is as important that financial machinery be provided to supply the needs of the farmer for credit as it is that the banking and currency systems be reformed in the interest of general business." The Progressive party pledged itself "to foster the development of agricultural credit."

In the spring of 1913 a commission of seven members appointed by the President traveled through Europe coöperating with a commission made up of members appointed by governors

of the several states and some of the Canadian provinces, to study agricultural-credit conditions in the Old World. This commission concluded from a study of European experience that long-term land-mortgage credit presents a problem so distinct from that of short-term personal credit that the two forms of credit cannot well be handled by the same bank or system of banks. The commission believed that the consideration of short-term personal credit should be deferred until after a land-mortgage system had been established, because the principles to be applied to the establishment of land-mortgage credit involve a more radical departure from existing practice in the United States and because it must remain uncertain to what extent existing institutions can cope with short-term agricultural credits until we shall have had the opportunity to observe the effect of the Federal Reserve Act and an adequate land-mortgage system, both of which should have a distinctly helpful effect on agricultural short-term credits.

The commission appointed by the President embodied its recommendations for the establishment of an agricultural land-mortgage system in a specific bill, which was introduced simultaneously in the Senate by Senator Fletcher of Florida and in the House of Representatives by Representative Moss of Indiana in January, 1914. Space does not permit a full description of the provisions of this bill. It proposed the organization under Federal charter of land-mortgage associations without limit as to number, with a minimum capital of \$10,000 each, to operate within the territorial limits of a single state. These associations might be organized either on the coöperative principle or on the joint-stock banking principle, and each was authorized under certain restrictions to issue its own bonds secured by farm mortgages. This bill was generally condemned by farmers' organizations because it was believed that under the conditions prescribed joint-stock banks would be organized rather than coöperative banks and that the bill was on the whole rather a bankers' than a farmers' measure.

Many bills were introduced at about the same time in both Houses of Congress dealing with rural credits and especially with the agricultural land-mortgage problem. The several bills represented different degrees of radicalism; some were well conceived and carefully drawn, others very hasty and incomplete. Of all the bills introduced by individual members, the one which received the most attention and the highest indorsement from farm organizations was that introduced by Representative Bathrick, of Ohio, providing for the loaning of money on agricultural land mortgages directly from the United States Treasury.

At the same time the Department of Agriculture was making an extensive study of rural credits. As a result of this study considerable valuable information was given to Congress, but the department did not evolve any concrete plan.

President Wilson, in his annual message delivered before the two Houses of Congress in December, 1913, called attention to "the urgent necessity that special provision be made also for facilitating the credits needed by the farmers of the country."

The Committees on Banking and Currency of the Senate and House appointed subcommittees on rural credits, and the two subcommittees held joint hearings and discussions for several months early in 1914. The joint subcommittee framed a bill which was introduced simultaneously in the two Houses in May, 1914, by Senator Hollis, of New Hampshire, and myself, respective chairmen of the two rural-credits subcommittees. Like the Fletcher-Moss bill, it dealt only with the land-mortgage problem. It provided for the organization under Federal charter of small coöperative farm-loan associations, each to operate in a county or group of contiguous counties, making mortgage loans only to its own stockholders and in turn selling the mortgages, with its indorsement, to a Federal Land Bank, in which each local association was to be a stockholder. The bill provided for the organization of twelve such land banks, each with a minimum capital of \$500,000, and each to operate

within a district fixed by the Federal Reserve Board, the twelve districts to comprise the whole United States. The organization of the land banks was insured by a provision that the Federal government should buy as much of the minimum capital stock of each of the land banks as might not be subscribed by local associations or by the public within thirty days after the opening of stock subscription books. The land banks were to issue bonds from time to time as they required funds, upon the approval of the Federal Reserve Board, and at a rate of interest fixed by the Board, and each bank was to guarantee the bonds of each of the other banks. In case the bonds did not sell readily at the interest rate prescribed by the Federal Reserve Board, provision was made for the purchase by the Secretary of the Treasury of such amount of the bonds as might be requested by the Federal Reserve Board, not to exceed \$50,000,000 in any one year.

The general plan proposed by this bill was followed in the Farm-loan Act finally passed, though many minor modifications were made, as well as certain very important changes, such as the establishment of a system of joint-stock land banks and the elimination of the provision for purchase of farm-loan bonds by the Treasury, which will be hereafter discussed in greater detail.

The Hollis-Bulkley bill met with general approval, except with respect to its provisions for government aid, which by many were considered too radical, and encountered determined opposition. The controversy over government aid made it impossible for the bill to be reported out of committee in either House for action by the Sixty-third Congress.

During the closing days of the Congress the Senate adopted, as an amendment to the agriculture appropriation bill, Senator McCumber's bill, which proposed to create, in the Department of the Treasury, a bureau of farm credits to loan on farm mortgages, at 5 per cent, an unlimited amount of government funds, to be raised by the sale of United States $4\frac{1}{2}$ per cent bonds at

par. Briefly, the amendment was radical in the extreme, and very loosely drawn, practically the whole operation of the system being left to executive discretion. It is hardly necessary to discuss in detail the provisions of the McCumber amendment, as it passed the Senate without discussion, and was apparently agreed to by Senators who could not have been in sympathy with its provisions, merely for the sake of injecting the subject of an agricultural land-mortgage system into the agriculture appropriation bill, so that the committee of conference between the two Houses would be authorized to deal with the question. A conference committee has very broad discretion in dealing with any subject-matter which is in disagreement between the two Houses, and its report is not subject to amendment, but must be voted up or down as a whole.

When the Senate amendments to the agriculture appropriation bill were considered in the House on March 1, the House voted to substitute for the McCumber amendment the Hollis-Bulkley bill, with minor technical changes, the only important change being the provision for the administration of the system by a newly created Farm-loan Board, instead of by the Federal Reserve Board, as provided in the Hollis-Bulkley bill. This change was clearly an improvement, as agricultural interests will always feel greater confidence in the viewpoint of their own board than in that of a body engaged primarily with problems of commercial banking; furthermore, it is already demonstrated by experience that the duty of administering the land-mortgage system would have been too much to add to the already burdensome tasks of the Federal Reserve Board.

But neither the McCumber amendment nor the Hollis-Bulkley amendment was enacted. The conference committee proposed, and Congress adopted, in lieu of both amendments, a provision creating a joint committee on rural credits made up of members of the two Houses, instructed to report to the Sixty-fourth Congress in January, 1916. The joint committee promptly organized and designated subcommittees on "Land

Mortgage Loans" and "Personal Credits." In January, 1916, the joint committee made its land-mortgage report to Congress, and submitted a bill to create an agricultural land-mortgage system, the bill being introduced simultaneously in the Senate by Senator Hollis and in the House by Mr. Moss.

This bill was debated and passed by both Houses with some amendments, but in all essentials it passed as reported by the joint committee. It is worth while to recall how nearly unanimously this measure was passed. It passed the Senate on May 4 by 57 to 5, and the House on May 15 by 295 to 10. The conference report was adopted in the House by 311 to 12 and in the Senate without objection. The Act was approved by the President and became a law on July 17, 1916.

III

Those who were charged with framing agricultural land-mortgage legislation were confronted with the problem of making a national system to apply to lands under many state sovereignties and under greatly varying conditions of climate, soil, crops, character of ownership, and methods of cultivation; they were confronted on the one hand with the American farmer's individualism and lack of coöperative experience, and on the other hand with his distrust of a system operated by bankers for banking profits; they were called upon to devise a system of land appraisal liberal enough to satisfy the borrower, yet careful enough to satisfy the investor in land-mortgage bonds, and to devise a system of management efficient in operation yet without the payment of large salaries or commissions; they were called upon to reduce interest on farm mortgages without unduly enhancing values of farm lands; they had to establish long-term loans in a country in which the amortization system was practically unknown, and they had to reconcile widely divergent views as to the proper function of the government in the premises. There should be no surprise that the Act as passed

comprises 35 sections and covers 25 large pages. Nor should we criticize the complexities of the Act. Complexities and difficulties are inherent in the subject and in the surrounding conditions. The true test to be applied to the Act should not be its brevity, or the ease with which it may be understood by the casual reader, but rather its adaptation to all existing conditions and to all the purposes to be accomplished. Simplicity should be manifested rather in the smooth working of the law in actual operation than in the smooth wording of it on paper. And by this true test the law bids fair to justify itself, though it would obviously be idle to expect perfection in a law setting up a system so new to our people that it must of necessity be largely experimental. Criticism of the "complexity" of the Act and criticisms of its mechanical workings must not be taken too seriously. The critics have had as little opportunity to observe its practical operation as have the authors. Whatever defects are developed by experience can easily be corrected, and there is likely to be as little partisanship shown in the task of correcting flaws as was shown in the preparation and enactment of the law.

In presenting the bill to the Senate last April Senator Hollis said: "The plan has been criticized because it is cumbersome and complicated and because the bill is long. . . . But the bill is not really long. It is as long as it is in order to make the operation simple and certain. It is not cumbersome. There could not be anything simpler than this bill." This is substantially true. Yet the Act contains nearly sixteen thousand words. A recital of all of its provisions would be tedious, and, unless special stress were laid on the vital points, it would tend only to confuse. For the present purpose the important things may conveniently be emphasized by the entire omission of minor details and technicalities. To get in a few words the essence of what is in the law, we may turn to the description of it that Senator Hollis gave to the Senate when he presented his bill:

The pending rural-credits bill provides for a Farm-loan Board which shall have general control over the system; twelve or more land banks which make loans on mortgage to the farmer; and many farm-loan associations which represent the farmers in their dealings with the land banks.

The Farm-loan Board is nonpartisan, consisting of four members, in addition to the Secretary of the Treasury.

Each land bank must have a capital of at least \$500,000.¹ If the public does not subscribe the entire amount, the government will take the balance.

The farm-loan associations are purely coöperative, made up entirely of borrowing farmers. Ten or more farmers may apply to the land bank of the district for a charter. Every farmer who wishes to borrow must become a member of the loan association, taking stock to the amount of 5 per cent of the face of his loan. The loan association takes out an equal amount of stock in the land bank, forwarding the money at once to the land bank. The land bank sends an official appraiser to examine the land, and, if the loan is made, forwards the funds to the farmer through the loan association.

When the land bank has mortgages on hand to the amount of \$50,000, it may issue a like amount of farm-loan bonds on the security of the mortgages as collateral. The land bank is limited in its issue of bonds to 20 times its capital and surplus. But as each borrower puts up 5 per cent of his loan in cash for capital stock, the issuing power of the land bank increases automatically.

The loan associations are purely coöperative and may be of limited (double) liability or unlimited liability.² All mortgages taken by the land bank from the members of a loan association are indorsed by it. The mortgages from the two classes of associations are kept separate, and bonds issued on the unlimited liability² mortgages should sell on a better basis than the others.

Farm-loan bonds issued by any land bank are guaranteed by all the other land banks, so that they have a broad insurance.

Every farm-loan bond is secured as follows:

1. By the capital, reserves, and earnings of the land bank which issues it.
2. By the capital, reserves, and earnings of the 11 other land banks.
3. By the collective security of all the mortgages in its division (limited or unlimited) of the land bank, the mortgages pledged being at least equal in amount to the outstanding bonds.

¹ This was amended. The act provides a minimum capital of \$750,000.

² The "unlimited liability" provision was eliminated by amendment.

Every mortgage pledged as collateral is secured as follows:

1. By the personal undertaking of the borrower.
2. By the security of the mortgaged land, in value at least double the amount of the loan.
3. By the capital, reserves, and earnings of the local association indorsing the loan.
4. By the individual liability of the members of the indorsing association.

It is believed that these bonds will be marketed at par on a 4 per cent basis. The maximum charge for expenses and profits of the system is 1 per cent on the face of outstanding mortgages, so that the farmer should get his money at 5 per cent. All the profits go to the loan associations in dividends and thus to the borrowers who are the shareholders in the local associations.

Loans to farmers are on long term, and may be as long as thirty-six¹ years. They are on the amortization plan, so that with each interest payment the borrower will pay in a small amount on his principal. If he pays in 1 per cent of the principal yearly, he will pay out in thirty-six years.

Loans must be on first mortgage and may not exceed 50 per cent of the appraised value of the land. The loan committee and the board of directors first pass on the value of the land and the character of the farmer. Before the land bank makes the loan its board of directors passes upon it and has the land appraised by a land-bank appraiser, who is a government official. In this way absolute safety is secured for each loan.

The interest of the members of the loan association is secured by their ownership of stock, and by their double or unlimited liability,² as the case may be. Most of the local work of investigation, collecting payments, and forwarding funds is done by them without expense. Their expenses will be very light.

The mortgages and farm-loan bonds will be exempt from taxation and the bonds will be a legal investment for trust funds.

It is believed that the system of land banks outlined affords a safe and attractive farm-land bond for the investing public; low interest rates, long-term mortgages, and easy payments for the farmers; low cost of administration; simplicity of organization and operation; adaptability to the needs of every section; and stimulation to the spirit of generous coöperation among farmers.

¹ Bill amended to provide for a maximum period of forty years.

² The "unlimited liability" provision was eliminated by amendment.

The system thus described is founded on sound principles. The mobilization of farm mortgages behind the several series of farm-loan bonds and the mutual guaranties of the Federal Land Banks make possible the creation of a national security in which investment may be made without the risks attendant upon the possible mismanagement or failure of individual farmers or upon sectional crop failures or catastrophes. Certainly through a period of years most of our farmers will succeed in paying their debts, and through this well-organized mobilization of mortgages will absorb the losses incident to individual failures, so that the investor will have a security so safe that he can afford to accept a return representing only the actual value of the use of the credit, without adding anything to compensate for the risk which has hitherto been involved in farm mortgages.

The exemption of the mortgages and farm-loan bonds from taxation only avoids double or treble taxation, since the lands which are the real basis of value remain subject to taxation according to the laws of the several states. The tax-exemption feature makes the bonds a more desirable investment and should substantially reduce the rate of interest demanded by the investor.

Another valuable feature of this coöperative land-mortgage system is that it is so organized that it will be to the advantage of all who have a voice in controlling it to reduce the interest rate to the farmer; all self-interest in raising rates has been eliminated. Quite properly whatever profits may arise from the operation of the system will ultimately go back to the borrowers in the form of dividends upon the stock of the local associations which they are required to purchase.

The amortization plan is established on absolutely sound principles. Amortization-plan loans cannot well be made by individual investors or by small institutions, since such lenders cannot use to advantage the small dribblets of repayment on capital account which come in from year to year over a long

period. Amortization loans should be made by institutions of large size, so that the annual amortization payments will be in sufficient volume for efficient reinvestment or for retiring obligations of the loaning institution. The concentration of the bond-issuing power in the twelve land banks adequately covers this point, as each of the institutions will undoubtedly have out enough loans so that the annual repayments on principal account will be considerable.

The act very wisely provides that the loans are to be made through small local coöperative associations. This gives the system the benefit of the knowledge which the farming members have concerning neighborhood land values and the personal character and ability of the applicants for loans. We may be assured that this knowledge will be used to protect the banks against making questionable loans, since every loan is guaranteed by the local associations and thus its ultimate repayment is a matter of direct financial interest to each and every member stockholder of the association. Of course the land banks and bondholders are still further protected by the close government supervision provided.

Coöperation is relatively new to the American farmer, and we often hear it said that he will not take kindly to a system which forces his coöperation with his neighbors and makes known to them the details of his land-mortgage operations. There is no doubt some force in this, but the loan applications already received by the Federal Farm-loan Board are abundantly sufficient to insure the successful inauguration of the system, and there is every reason to believe that the actual operation of the system will provide such an object-lesson in the benefits of farmers' coöperation that the objections which have been suggested will, as time goes on, more and more fade into insignificance. In order to accelerate the farmers' education in the coöperative idea as well as the other features of the operation of the Farm-loan Act, the Farm-loan Board is authorized from time to time to prepare and distribute bulletins on the subject.

With the help of this provision for propaganda the sound principles underlying the system should soon commend themselves to American farmers generally, and there is every reason to believe that the Farm-loan Act marks the beginning of a great and valuable coöperation among farmers hitherto unknown and believed to be impossible.

IV

There is a danger that legislation designed to encourage farm ownership by making farm lands more available as security for mortgages and by reducing the rate of interest on farm loans may defeat its own purpose. For if land is made more readily available as security, and the interest on mortgage loans is reduced, the value of the land is thereby increased. And if the value is increased, the increment of price will go to the present owner of the land, and it will be so much the harder for the tenant or farm hand to become a farm-owner, and the community will not be benefited at all. Some enhancement of farm-land values probably cannot be altogether avoided if we are to improve farm-mortgage conditions at all; but it is a tendency which should be minimized as far as possible.

The most practical plan which has been devised to guard against the tendency to land speculation is to provide for the making of the loan to the man rather than to the land. The Farm-loan Act does this, for it limits the amount that may be loaned to any one individual to \$10,000, and it limits the purposes for which a loan may be made. No loans may be made through farm-loan associations except to provide for the purchase of land for agricultural uses; for the purchase of equipment, fertilizers, and live stock necessary for the proper and reasonable operation of the mortgaged farm; for buildings and for the improvement of farm lands; or to liquidate indebtedness of the owner of the mortgaged premises existing at the time of the organization of the new system or subsequently incurred for one of the specific purposes here set forth. Loans are to be

made only to those who are actually engaged, or agree forthwith to engage, in the cultivation of the mortgaged land. With these restrictions it is obviously impossible that anyone could use this system for the purpose of holding land for a rise in value, and it would be difficult for a landlord taking the benefit of tenant labor to get much advantage out of the system.

Unfortunately the provisions intended to safeguard the system against possible speculative uses are not made to apply to the joint-stock banks for the incorporation of which under Federal charter provision is made in the Act. It is provided that Joint-stock Land Banks may be organized by private capital subject to the same requirements and conditions as provided for the Federal Land Banks; each is to have at least \$250,000 of capital stock and to be limited in the making of loans to first mortgages within the state in which it has its principal office and within some one contiguous state. The Federal Farm-loan Board may use its discretion with respect to chartering these institutions, and has decided to defer the issuance of any charters until the organization of the Federal Land Banks shall have been completed. These Joint-stock Land Banks are permitted to make loans to others than cultivators of the soil, are not limited with respect to the purposes for which loans may be made, and are subject to no fixed maximum which may be loaned to any one individual. They will, therefore, to the extent that they are successful, tend to increase land prices, and so to make more difficult the acquisition of land by the landless, and to make more easy the financing and carrying of large landed estates by absentee landlords. In fact, the large loans will be the most encouraged because they are likely to be most profitable to these institutions organized solely for profit.

The Joint-stock Land Banks will provide a very unnecessary competition with the coöperative system, which, being so organized as to turn back to the borrower every dollar above the actual cost of getting his loan, needs no competition so

far as the borrower's interest is concerned. Every piece of business which the Joint-stock Land Banks may succeed in drawing away from the coöperative banks will increase the overhead costs of the coöperative system and so increase the interest rate to the borrower. The tax exemptions provided in favor of the Joint-stock Land Banks will inure to the benefit of the capitalists investing in the stock of the banks and to the benefit of the owners of land. It is, of course, true that many active farmers are owners of land, but the benefits provided through the coöperative loan associations are available to them because of the fact that they are active farmers, and are limited to their needs as active farmers, whereas the benefits provided through the Joint-stock Land Banks are available to them because they are landowners, and are available to the extent that they are landowners without respect to whether they are active farmers or not.

The territorial limitations permitting a Joint-stock Land Bank to do business only in the state of its principal office and one contiguous state provide too large a territory to permit that close personal knowledge of lands and borrowers which will be possible for the coöperative loan associations, yet too small a territory to insure the bonds of such institutions against the possible ruinous effects of sectional crop failures or disasters.

V

The provision of the Act making the land banks depositories of government funds is technically open to criticism. Of course, this could not have been done for the sake of the convenience of the Treasury Department. It was done undoubtedly for the purpose of permitting the Secretary of the Treasury to deposit funds in order to help out the banks in case they may need to be tided over in making interest payments on outstanding farm-loan bonds. Such help will tend to insure promptness in the payment of bond interest and so perhaps make the bonds more salable, and it can in a measure be justified, though a more

direct and substantial method of government aid would have been preferable. The method adopted establishes the principle of government aid, but the limitation providing that no more than six million dollars may be on deposit with the land banks at any one time is such as to make the substantial effectiveness of the aid very doubtful, especially if the bonds outstanding shall amount to hundreds of millions of dollars.

Farm-loan bonds secured by the mortgages provided for in the Act may be issued by the several Federal Land Banks, as was stated above, to an amount not exceeding twenty times their capital stock, but each loan made automatically increases the capital stock of the bank making it, because the indorsing loan association is required to buy land-bank stock to the extent of 5 per cent of each loan made on its indorsement. The rate of interest will be fixed by the Farm-loan Board but cannot be higher than 5 per cent. The security behind these bonds has been specifically stated in the extract quoted from Senator Hollis's speech, and there is no reason to doubt that such tax-free bonds will afford a very appropriate employment for capital seeking long-term investment. Senator Hollis says of such capital:

It includes the ordinary savings of the school-teacher, clerk, minister, and wage-earner; the proceeds of life insurance in the hands of widows and other beneficiaries; funds belonging to estates, minors, and wards in chancery, in the hands of executors, guardians, and trustees; funds of insurance companies, benevolent orders, and societies of various kinds; endowments of colleges, hospitals, museums, and other institutions; and assets to be invested by receivers, courts, and governments. The aggregate of these is enormous. They require an investment that is absolutely safe and reasonably liquid in the sense that it may be converted into cash upon moderate notice; in other words, that it may find a ready market. A safe investment of this character need not carry a high rate of interest.

The bonds seem good enough to command a wide market at a very low rate of interest, yet it is hardly reasonable to expect that they will sell readily in competition with more seasoned issues pushed by expert salesmen making commissions on their

sales; at least until the farm-loan bonds have themselves become somewhat seasoned through prompt payment of interest over a series of years, the building up of land-bank reserves, and a more accurate general understanding of the financial status of the Federal Land Banks. It is likely, therefore, that the first issues of bonds will have to carry a somewhat higher rate of interest than will be demanded after the system is more firmly established and better known to the investor's mind. This in turn leads to another embarrassment which aggravates the situation. If it is likely that future bonds will be issued at a rate of interest lower than that carried by the first issue, it follows that when that happens the farmers will be able to borrow at a lower rate and the first borrowers will want to refund their loans into new loans carrying the lower interest rate. This they can do, as their mortgages are payable at their option after five years. The probability that a large number will be refunded after five years into new loans at a lower rate makes it necessary that the bonds now issued must be callable at the option of the land banks at par after five years. This in turn makes the present bonds less desirable as an investment, as the market value could not go very much above par when the bonds are callable at par in so short a time. This in turn tends to necessitate a higher interest rate on the bonds first issued. In view of these considerations, it seems likely that the Farm-loan Board will at the outset fix rates of interest on the bonds at the maximum rate, 5 per cent. This would make the interest rate to the farmer 6 per cent and would be a great relief in nearly every section of the country. But will these unseasoned bonds, which are so far not very well advertised, sell sufficiently readily, even on a 5 per cent yield, without the services of brokerage houses or bond salesmen for whose compensation no direct provision is made in the Act? In one respect the situation is most favorable. So much money has been made in the course of the existing industrial prosperity, and so much is still being made, that great accumulations must of necessity be seeking

investment now and in the near future. There could hardly be a more favorable time so far as financial conditions are concerned for marketing bonds of this character. It is to be hoped that under these conditions a sufficient number of the bonds will readily be absorbed to insure the success of the system.

The provision of the Hollis-Bulkley bill for purchase of bonds by the Secretary of the Treasury would have solved this question beyond doubt. It might have created sufficient public confidence to assure the purchase of the bonds by the public, so that no call whatever would have been made upon the Treasury. But if it had resulted in making a substantial call upon the Treasury in the course of the coming spring, it would of course have been necessary to increase correspondingly the United States bond issue, which seems likely to be necessary in any event. As the law now stands, without any provision for the purchase of farm-loan bonds by the Treasury, it is difficult to say just what would be done in the event the market should fail to absorb farm-loan bonds sufficiently rapidly to meet the demand for loans. It would seem that a government system having been set up, supported by Treasury subscription to capital stock of land banks and deposits of Treasury funds to tide over emergencies, the opposition to government aid has more or less frankly collapsed, and the only question remaining is as to the kind and amount of government aid which shall be afforded. This will not be determined by any theoretical considerations; it necessarily follows from the mere establishment of this government system that the government must and will give it support to whatever degree and in whatever manner may be necessary to make it a success. The government, having subsidized the system by purchasing millions of dollars of capital stock of land banks upon which it cannot get a dividend, could hardly refuse in case of necessity to purchase farm-loan bonds, a preferred security paying the market rate of interest.

The establishment of an entirely new system must at best be in part an experiment, and it is to be expected that experience

will point the way to many changes and improvements in the Farm-loan Act; yet it is certain that a very auspicious start has been made, and the very anticipation of the establishment of a Federal farm-loan system has already caused interest rates on farm mortgages to come tumbling down to a very marked degree throughout the length and breadth of the country. This is as it should be. There is no reason why banks and insurance companies or private investors should be driven out of the farm-loan business, but it is most important that they should be held in check by the active competition of a coöperative system under efficient government supervision and control.

The Farm-loan Act provides adequately for the mobilization of farm-mortgage credit; it establishes the amortization system of repayment; it provides adequately for care and conservatism coupled with real sympathy in the making of loans; and it provides some safeguards against the undue use of the benefits of the system for land speculation. It has given us a well-qualified and efficient Farm-loan Board, and has committed the government, without party division, to the great task of establishing an adequate American agricultural land-mortgage system. A great reform, agitated and labored with for years, has already begun to bear fruit, and bids fair in the course of the next few years to fulfill most of the hopes that have been aroused by the discussion of it.

THE PROBLEM OF THE RURAL WOMAN¹

KATE WALLER BARRETT

I LISTENED with profound interest to the discussions of the problems of rural life, from its many angles, during this meeting of the American Sociological Society.² To my mind, almost all of the problems presented react with particular force upon the woman in rural life; at the same time it is interesting to note that the woman, as a definite part of the problem, has not been mentioned by any of the speakers.

From my observation I believe that the depletion of the rural population is due more to the dissatisfaction of women with living conditions in the country for them and their families than it is to that of the men. The old adage *Cherchez la femme*³ is particularly true in this case, and to one familiar with rural life there are many reasons which justify women in their desire to leave the country.

Men, as a rule, have very little respect for the amount of ability that is required in a woman to accomplish her task. Possibly women have just as little respect for the necessary qualities which are demanded of men in fulfilling their vocations, but women are a little more polite in the way in which they express themselves on the subject. Men must be more intelligent in regard to the value of women's contributions and more willing to look upon the investments in the improving of the home as they are in other departments of farm life, and must

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² Held at Columbus, Ohio, December 27-29, 1916.

³ Look for the woman.

consider the standardizing of the home as important as that of other departments of the farm. It is not difficult to find the reason for the exodus of women from the country.

The love of the country is in my blood, having come to me through generations of country-loving ancestors. I still own a piece of the original tract of land which came to my great-great-grandfather, through a colonial grant, from Charles II, my paternal ancestor being a direct descendant of one of Captain John Smith's colony. Ever since those early colonial days every member of my family, whether in the professions or not, has been also a farmer. I was the oldest of eight girls, but in spite of this inherited love of everything pertaining to country life, I cannot remember a time when I had not made up my mind that I would never rear a family in the country. My seven sisters remained in the country, but not one of their children, thirty-four in number, has either married or settled in the country. It would seem that in seeking city life I was only a generation in advance of the exodus of the family from the country. While I have had a city home always, I have had a country home as well, and much of my time and thought have been given to the consideration of rural problems. So convinced am I of the possibility of the development of rural life to a point where it will not demand sacrifice on the part of the individual, that I have spent many years in travel, investigating rural problems in farm lands, as well as in every state in the union, to try to find what is the solution of the problem. I am still in the dark. But in spite of this I am organizing a Farm Industrial Training School for girls, twenty miles from Washington, D.C., where I can have expert advice from the Department of Agriculture, and where my object is to educate both town and country girls, of their own volition, to seek country homes. I am dubious about the results. The obstacles are so formidable and require so much character and ability to overcome, that unless I can find a group of super-women to make farmers from, or else can produce a social cataclysm which will

make drastic changes in the organization of rural life, I fear that most of my pupils will satisfy themselves with suburban homes.

The contributions which women may make to the productivity of the world are minimized everywhere, but it is particularly true of the woman in rural life. I know of no other position where a woman is self-supporting in which she has to work so hard for her board and clothes, and with so little opportunity for advancement or self-expression, as the woman on the farm, where the only income of the family is that derived from labor. The pictures which have been presented here of the well-to-do, well-dressed farmers driving in their automobiles to social centers in the neighborhood, or to market their products, which have been cultivated and garnered with up-to-date methods, as a rule represent the class that either have capital invested in farming or else some addition to their income other than that which is derived from labor. But even in homes represented by this class it is astonishing to find that, while much thought and money have been expended in conducting farm activities with up-to-date methods and machinery, the women are still conducting their activities in practically the same way as their grandmothers did.

The farm magazine expends much effort in trying to make men realize the importance of improvements and conveniences in the dwelling-house, and paints glowing pictures of what may be done with little money in making both the homes and the men more attractive; but alas, the only member of the family who takes pleasure in reading and pondering upon these things is the woman. The man, coming in weary from his arduous day's work, is absorbed in the problems of the morrow and in his crops, and has no inclination to enter into any discussion of the needs of the house. The woman is powerless to accomplish the changes alone.

I heard Irving Bacheller tell an interesting story a few days ago, from his experience. His father owned one of the deserted farms in New England, from which the family had fled when

Dr. Bacheller was a boy. When he drove up in front of the house, a scene of desolation met his view. Broken shrubbery, grass, and weeds grew up beside the porch, which sagged at one corner and upon which sat a helpless specimen of middle-aged man in earth-colored trousers, with straggling hair and whiskers. Without taking the trouble to come out and meet the visitor, he called: "Who be you?" When Irving Bacheller had answered this question and entered the house, he found the desolate appearance even more pronounced. After a cursory view of the premises they went out upon the porch again and sat down to talk over the future possibilities of the farm. Soon a neighbor, of similar appearance to the host, arrived. Turning to Irving Bacheller, he made this same inquiry: "Who be you?" When he learned that it was Irving Bacheller, the absentee landlord, he turned to him and in a censorious voice said, "You are a long time coming back to the old place. You ought to be ashamed of yourself not to have come sooner. It is a shame the Bachellers left this fine farm; if they had stayed here it would not have looked like it does now."

The man who had spent his life on the farm looked at the farmer and then at Irving Bacheller, and with shrewd Yankee wit replied: "Well, neighbor, I guess you are about right; if Irving Bacheller had stayed on the farm, I guess the farm would have looked better, but he would have looked worse."

This picture is typical of the impression in the minds of many women in the country, who feel that if they remain, their families must be sacrificed to the farm, if the farm is going to be a success. They are not willing that this should be; hence, the initiative for leaving the country often originates with the women of the family. If they cannot persuade their husbands to undertake the difficult proposition of supporting the family in the city, they will bend every effort toward getting the girls and boys into some other line of activity than that of farming. The ordinary father of the family living in the country, if he could keep his children with him to assist him in cultivating the

farm, would not care to move to the city, where the burden of supplying the daily needs of the family is much heavier on the father than it is in the country, where even the smallest child can contribute its "bit" toward lessening the burden of the father. But it is the woman of the family, who recognizes the limitations both in her life and in that of her husband, who is not willing that her boys and girls should meet a like fate. What matters it to her that the quality and supply of food in the country is such as only the wealthy can afford in the city? "Man does not live by bread alone," and she would prefer a box of crackers and a can of tomatoes, if need be, if with it she could have the social and educational advantages which urban living would afford her children.

But the boys and girls do not need this added stimulation to their already awakened desire for city life. The pictures of town life have already fascinated ambitious and self-reliant boys, and the opportunity for becoming a recognized force in the world's work has taken hold of the mind of the girl if she has initiative; or the possibility of the prince waiting for her on the corner when she alights from the train, suit-case in hand, with a velvety blush upon her cheek and the exhilarating ozone of the country clinging to her gown, has obsessed the romantic and unpractical female member of the family. She forgets that the Maud Mullers of pastoral pictures always captivate the princes while they are still in the country, and have a suitable background for their charms, but that the same girl, when transported to the city, makes a very different impression.

The younger generation of women who leave the country and come to the city on their own initiative includes two very distinct classes: first, the ambitious, self-respecting girl who places a certain estimate upon her industrial and personal value, and secondly, the shallow, vain girl who desires to find in outside interests the incentives which should come from within. In the majority of cases both of these types would be better off in the country, provided that too great a sacrifice

of personal values was not required from those of the first class. Rural life needs women of initiative and individuality, and if conditions were so adjusted that she could find opportunities for self-expression, added to economic independence, woman's values would be doubled to civilization in the country. The strain and drain of competition in city life is heavier on a woman than on a man. Much of woman's peculiar ambition, which is most valuable to civilization, is ruthlessly overlooked or destroyed by it. While it is true that she nobly plays her part in the mart of commerce, her highest and most normal gifts will find the opportunity for their best development in country life rather than in commercial industrialism.

The second type of country girl who goes to the city, ninety-nine times out of a hundred, shortly becomes one of the problems of civilization, for which both city and country are likely to pay. Her thoughtless, careless attitude, which in country surroundings may yield but a modicum of evil results, under city conditions soon degenerates into viciousness, and as long as she lives she will be the most expensive and dangerous unit which society must carry as a "dead weight."

But apart from the arduous labor of the farmer's wife at home, — for the old adage, "Man's work will run from sun to sun, but woman's work is never done," is as true to-day on the farm as it was one hundred years ago, — there are other limitations to woman's activities in the country which are possibly even more responsible for her dissatisfaction with rural life. The rural delivery brings to her door the most up-to-date information with regard to the activities of women elsewhere, and even if she did not subscribe to magazines, the advertising of to-day, which is so freely distributed, is so attractive and effective that one cannot be in ignorance of the efficient activity of woman everywhere, which is in the very air we breathe. Farm women learn of the civic activities of women, and of how they are establishing and standardizing the schools, and of the opportunity which is given them to have a part in wielding their in-

fluence for better government and the wise expenditure of the taxpayer's money. The rural woman is almost entirely cut off from this phase of modern life, and yet no one feels more keenly than she the necessity of a change in trying to solve the need from her viewpoint. As a rule country politics are chaotic if they are not vicious. The man who is too lazy or inefficient to be a good farmer is usually the office holder. The county is not considered as a whole and the taxpayer's money is more thoughtlessly spent than in the city.

If men are jealous of women outside of their own place in the city, they seem doubly so in the country, but I believe this arises more from the fact that farmers themselves are not in touch with the political situation, rather than from a positive objection, on their part, toward a woman's participation in political matters. I believe that the extension of the ballot to women will be of the greatest assistance in making the country more desirable to women, and it is interesting to note that in states which have given women the ballot it has almost invariably been the male votes of the rural population which have given the largest returns in favor of the extension of suffrage to women.

The study of the county as a whole, and of its institutions and the introduction of up-to-date methods of conducting them with a budget system, will go a long way toward developing such agencies as are absolutely necessary to a proper rural life. Women have the necessary experience, and with home life properly organized, should have the leisure to give time and valuable assistance to the solution of these problems.

The opportunities for a variety of interest, so necessary to a well-rounded life, can be had in the country just as well as in the city, and from an economic viewpoint would be of great value. Small coöperative agencies, the stock locally owned, such as coöperative laundries, bakeries, creameries, and even a coöperative store, would not only keep capital at home, but would also develop the business interests of rural men and

women, and would more quickly stimulate personal interest than could be done in any other way. County activities such as civic leagues, with departments covering the fields particularly applicable to rural life, and coöperating with the county agents of the agricultural department, through the organizations which they have established for boys and girls, have immense possibilities, and the development of them would appeal to the women particularly, holding, as they do, future possibilities for a broader life for the boys and girls. Women recognize in them the opportunities for remaining in the country and there training the children for the larger life which they dream of for them. Even if this dream is never realized by this training, the child is better fitted for a continuation of the country life.

The realm of practical life in the country from a decent woman's standpoint is equally hopeless. The two prime necessities for living, water and light, are often lacking in the country. If you wish to speak the last word in condemning a city tenement, you say it has not an adequate water supply. The country home that *has* is a *rara avis*. I do not mean to insinuate that country people are not clean, but the psychological difference between taking a bath and washing is as great as having something to eat and dining. The unnecessary labor and privations which women endure from lack of a convenient water supply are of themselves herculean. Equipment for suitable lighting is almost as inadequate. The primitive tallow dip of our ancestors was not much worse than the smoky kerosene lamp found in most country homes. These deficiencies can be partly overcome under the most adverse conditions, if the men are properly impressed with the necessity of so doing.

They usually are impressed when they live under conditions that make it impossible for them to get women to do the drudgery for them, as I can testify from the remarkably ingenious methods which are used in railway construction camps. Temporary in character though they be, they often outrank, in point

of hygiene and comfort, homes which women have had to occupy and rear a family in for a hundred years!

Men who have never before given any thought to the equipment of the domestic ménage, so long as it was run by women, suddenly discover that masculine strength is too valuable to be ruthlessly wasted, and as if by magic a few empty molasses barrels to catch the rain-water from the roof, with some rude plumbing, or wooden spills fastened together with green withes, suddenly transform a leafy bower into a kitchen sink or a bathroom. In such temporary establishments even acetylene gas is not unknown, and you never visit a camp where you do not find fine gasoline lamps whose brilliancy and steadiness rival electricity; but who ever heard of a poor farmer's wife having money to buy such a lamp, looked upon as a luxury or an extravagance rather than as a prime necessity?

Water and light must become common possessions of country life before women will be satisfied to rear families in the country, if they can help themselves.

The material for leadership among country women is not lacking; they have proved this by the way they have quietly but persistently led the men (almost unconsciously on the part of the men) from the country to the city. They will even more readily lead them back to the country when conditions justify their doing so, for women know that under proper conditions the country is the best place for growing children, and that every child loses something from his life that nothing in the way of after-success can atone for, if he has not spent a large part of his life in the country. One of the good things which has come from the border service of our militia is that many of these soldiers for the first time have lived away from the artificiality of city life and have come in touch with nature and life in primitive forms. The plumber, the carpenter, the salesman, the artist, the lawyer, will all take back to their respective tasks a new inspiration and a vision of their activities as an integral part of the whole scheme of the universe. If the wives

of these same men had been similarly impressed, we might have had an exodus of these men to the country permanently, for upon the woman largely depends the selection of the home of the family.

That the material for leadership is not lacking among country women is also shown by the avidity with which they avail themselves of every opportunity which comes to them. All educational, moral, and civic movements in the country depend upon the support of the women, and if it were not for the good spreads which the women provide and serve at the men's gatherings, I fear the attendance would decrease woefully. For be it known that the chief attraction of educational and social functions is a good meal! Rail at the lack of culinary education as much as you please and decry the frying pan and the lard jar, but the fact remains that no one can compete with the rural woman in cooking a feast fit for Lucullus!

It is touching to see how the rural woman, in spite of her starved and undeveloped life, eagerly avails herself of any call which comes to her for service. The fact so long overlooked, that she is needed, seems to act as a stimulus. The Civil War in our own country, both North and South, illustrated this. No sacrifice was too great, no work too arduous, pain was pleasure because it gave an opportunity for service. The present European war is developing the same conditions, as is proved by the millions of stitches that have been taken by never-ceasing knitting needles, and the wonderful way in which this old art of knitting, which had almost gone out of fashion, has been standardized, by these rural women to meet the needs of modern warfare. The "Queen Mary toe" and the "Kitchener heel" are words as familiar in the allied trenches to-day as are aëroplanes and caterpillars. The German women have evolved a fashion of knitting, the most up-to-date, labor-saving, efficient method, which has been adopted by the women of the allied countries also, although they name it the "Continental style." Many other instances could be cited to prove that with the

least encouragement the rural woman would make valuable contributions to progress.

All this valuable material is at present going to waste because there is no attention paid to its development and no atmosphere created to stimulate its dormant possibilities.

Again, I repeat, the rural problem is the problem of the rural woman, and the solving of this problem lies in the hands of the rural man.

"NATURA IN MINIMIS EXISTAT"¹

JOHN BURROUGHS

I.

THIS saying of Aristotle's is usually translated from the Greek as if it meant that Nature is seen only, or more fully, in "least," whereas it is more probable that Aristotle meant to say that Nature is as complete in the small as the great, that she is whole in all her parts — as much in evidence in the minute as in the gigantic, in the plant as in the oak, in the gnat as in the elephant, in the pond as in the sea. In the clay bank washed by rains, by the roadside, you may perceive the same sculpturing and modeling that you see in vast mountain chains. In California I have seen in a small mound of clay by the roadside, that had been exposed to the weather for a few years, a reproduction in miniature of the range of mountains that towered above it — the Sierra Madre.

A rivulet winding through a plain loops the same loops and oxbows that the Mississippi makes traversing the prairie states. The physical laws at work are the same in both cases. Has not some poet said that the same law that shapes a tear-drop shapes a planet? The little whirlwind that dances before you along the road in summer, and maybe snatches your hat from your head, is a miniature cyclone, and in our hemisphere it rotates in the same direction — in opposition to the hands of a clock.

Mere size does not count for much with Nature; she is all there, in the least as in the greatest. A drop of dew reveals

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the rainbow tints as well as the myriad drops of the summer shower, and the bow hovers in the spray of a small waterfall as surely as in that of Niagara. The thunderbolt leaps with no more speed across the black chasm of the clouded heavens than does the electric spark in your laboratory leap across the tiny space from one pole to the other.

But the big-lettered and startling headlines in Nature's book occupy the real nature lover less than does the smaller print. The big and exceptional things all can see, but only the loving observers take note of the minor facts and incidents.

Emerson in his journal thinks it worth while to notice the jokes of Nature. He cites the Punch faces in the English violets, the parrots, the monkeys, the lapwing's limping, and the like petty stratagems of other birds. He might have cited the little green tody of Jamaica, which is pretty sure to make one smile, or the murres of the Northern seas with their Jew-like profiles and short legs. But of course Nature does not joke; it is man that jokes and experiences a sense of humor in certain of her forms, but all these forms have serious purposes. Inanimate things often behave in a way to excite one's risibles, but that end can be no part of the plan of Nature. When inanimate things act like human beings we laugh, and when human beings act like inanimate things we laugh; why we laugh it would not be easy to say.

Most animals certainly have a keen sense of play, but it is very doubtful if even so humanized an animal as the dog has any sense of humor. The grotesque is pretty sure to frighten him instead of amusing him. The sense of humor implies powers of ideation, which the lower animals do not possess. The waltzing and saluting and other courtship antics of certain birds are very amusing to the human spectator, but it is all very serious business with the birds. I always have to smile when I see a chipmunk come up out of his hole into which he has been hurrying his winter food supply, stand up straight on his hind legs, and quickly wash his face. How rapidly he passes his paws

over that delicate nose and face, looking around the while to see if any danger is near! He does this at every trip. When we say on witnessing any act of an animal, "How cunning!" we feel, I suppose, a sense of its humanness; it suggests our own behavior under like conditions.

Last spring the vanishing of the deep snows from my lawn gave me a glimpse of the life and works of the meadow-mice in their winter freedom under the snow. At one place standing out very clearly was a long mouse highway, sunken into the turf and leading to a large dome-shaped nest of dry grass, which it entered by a round hole on one side and became two highways leading off over the turf. It suggested a tiny railroad station with its converging lines. "How cunning!" exclaimed some school children and their teacher to whom I pointed it out. The mice had evidently enjoyed privacy, freedom, and safety there under the two feet of snow, as the record they left clearly showed.

I smiled one day last April when, walking near the edge of a small pond, I saw a musk-rat on shore very busy stuffing his mouth with dry leaves, then take to the water, holding his bedding well up till he came opposite to his hole in the bank, when he dived and swam to its under-water entrance. My smile was provoked, I suppose, by the discrepancy between the care the animal took to secure dry leaves, and the necessity that compelled it to plunge under the wave in order to reach its chamber. I do not suppose the musk-rat could have interpreted my smile had he seen it and tried.

I was interested and amused by the behavior of the big garter snake I met in my field walk one October day. The day was chilly and I could not stir the snake into any considerable degree of activity. He was sluggish and made no effort to escape, though I teased him with my cane for a quarter of an hour. He presently woke up enough to scent danger in my cane. Probably he had a dim sense that it was another snake. He flattened himself out and became a half round, opened his mouth

threateningly, but would not seize or strike my stick. He coiled beautifully, and when I turned him on his back he righted his body. After a while I noticed that his body began to contract at a point about one third the distance from the end of the tail; then, as I continued my teasing, he folded the lower part of his body back upon himself and twined it around the upper, like a vine doubling upon itself. If he was taking precautions against my stick as another snake trying to swallow him, it was good tactics; it would have made the problem of swallowing him much more difficult. I do not think it at all probable that the snake had ever experienced such uncivil treatment before, and the emergency was met by the best resources the poor half benumbed creature had. "Swallow me, if you will, but I will stick in your throat if I can." I left him unharmed, doubled and twisted in self-defense.

Jokes in nature, no! but there are curious and amusing forms and incidents — grotesque shapes, preposterous color schemes and appendages, from our point of view, but all a serious part of the complex web of animal life.

The transparent trick of the ground-building birds to decoy you from their nests or young is very amusing, but the heart of the poor mother-bird is in her mouth.

The cock or mock nests of the house wren and marsh wren look like jokes; in fact the wrens themselves seem like jokes, they are so pert and fussy and attitudinizing, but whether these extra nests are sham nests — or whether they are the result of the overflowing measure of the breeding instinct, or decoy nests, serving a real purpose in concealing or protecting the real nest, is a question.

There are more tragedies in wild life than comedies, and fear is a much more active agent in development than joy or peace. The only two of our more common wild animals that I recall, in which the instinct or impulse of fear is low, are the porcupine and the skunk. Both are pretty effectively armed against their natural enemies and both are very slow, stupid animals.

When I stop to contemplate the ways of the wild creatures around me and the part they play in the all-the-year-round drama, my thoughts are pretty sure to rest for a while on the crow. From the wide distribution of the crow over the earth in some form, it would appear that Nature has him very much at heart. She has equipped him to make his way in widely diversified lands and climates. He thrives upon the shore and he thrives upon the mountains. He is not strictly a bird of prey, neither is he preyed upon. What is it in nature that he expresses? True, he expresses cunning, hardiness, sociability; but he is not alone in these things. Yet the crow is unique; he is a character, and at times one is almost persuaded that he has a vein of humor in him. Probably no country boy who has had a tame crow has any doubt about it. His mischief-making propensities are certainly evident enough. His soliloquies, his deliberate cat-calls and guttural sounds, his petty stealings, his teasing of other animals, his impudent curiosity, all stamp him as a bird full of the original Adam.

Country people are now much more friendly to the crow than they were in my boyhood. He is not so black as he was painted. The farmers have learned that he is their friend, for all his occasional corn-pulling and chicken-stealing. His is the one voice you are pretty sure to hear wherever your walk leads you. He is at home and about his own business. It is not his grace as a flyer that pleases us; he is heavy and commonplace on the wing — no airiness, no easy mastery as with the hawks; only when he walks is he graceful. The pedestrian crow! how much at home he looks upon the ground — an ebony clod-hopper, but in his bearing the lord of the soil. He always looks prosperous; he always looks contented; his voice is always reassuring. The farmer may be disgruntled and discouraged, his crows are not. The country is good enough for them; they can meet their engagements; they do not borrow trouble; they have not lived on the credit of the future; their acres are not mortgaged. The crow is a type of the cheerful,

successful countryman. He is not a bird of leisure; he is always busy, going somewhere, or policing the woods, or saluting his friends, or calling together the clans, or mobbing a hawk, or spying out new feeding-grounds, or taking stock of the old, or just cawing to keep in touch with his fellows. He is very sociable; he has many engagements, now to the woods, now to the fields, now to this valley, now to the next — a round of pleasure or duty all the day long. Not given to solitude and contemplation like the proud hawks, not pugnacious, never or rarely quarreling with his fellows, cheerfully sharing his last morsel with them, playing sentinel while they feed, suspicious, inquisitive, cunning, but never hiding; as open as the day in his manners, proclaiming his whereabouts at all hours of the day, looking upon you as the intruder and himself as the rightful occupant. The stiller the day the more noise he makes. He is never a sneaker, never has the air of a prowler. He is always in the public eye or ear. His color gives him away, his voice gives him away; on the earth or in the sky he is seen and heard afar. No creature wants his flesh, no lady wants his plume, though a more perfect and brilliant ebony cannot be found in nature. He is a bit of the night with the sheen of the stars in it, yet the open day is his province, publicity his passion. A spy, a policeman, a thief, a good fellow, a loyal friend, an alarmist, a socialist, all in one. Winter makes him gregarious, as it does many men; at night he seeks the populous rookery in the woods, by day he wanders in bands seeking food. In spring he establishes a crow network all over the country and is rarely out of ear-shot of some of his fellows. How we should miss him from the day! Among our community of birds he is the conspicuous, all-the-year-round feature. We do not love him, there is no poetry in his soul; but he challenges our attention, he is at home in the landscape, he is never disgruntled. Come rain, come shine, come heat, come snow, he is on his job and is always reassuring.

II

The book of nature is always open winter and summer and is always within reach, and the print is legible if we have eyes to read it. But most persons are too preoccupied to have their attention arrested by it. Think of the amazing number of natural things and incidents that must come under the observations of the farmer, the miner, the hunter, that do not interest him, because they are aside from his main purpose. I see a farmer getting his cows every morning in the early dawn while the dew is on the grass and all nature is just waking up, and think that during the twenty or more years that he has been doing this, what interesting and significant incidents he must have witnessed in the lives of the wild creatures, if his mind had been alert to such happenings! But it was not. He noticed only his cows, or when his fences needed mending, or where a spring needed clearing out. What a harvest Thoreau would have gathered during that score or more of years! From ant to bumble bee, and from bumble bee to hawks and eagles, he would have caught the significant things. Rarely can the farmer tell the poet or the naturalist anything he wants to know, because he has not the seeing eye, or the hearing ear. The fox hunter can tell you of the foxes he has killed or pursued, and just what it was that turned those that escaped him from their runway, but he can tell you little about the lesser game — what the mice and squirrels are doing, or the chickadees or woodpeckers are saying; his interests lie elsewhere. A downy might be excavating his winter retreat in a dry stub or branch over his head and he not know it. A chipmunk might be digging his hole in the field the farmer is plowing in September, and he none the wiser. The poet can say to the farmer:

One harvest from the field
Homeward brought the oxen strong;
A second crop thine acres yield
Which I gather in a song.

And an Audubon or a Fabre would bring home an equal and a different harvest.

Our interest in nature is a reflection of our interest in ourselves — Nature is ourselves extended and seen externally. We experience a thrill of interest when we learn that the plants breathe and sleep as we do — that they have ingenious devices for disseminating their seed and for securing cross-fertilization; that there is competition among them and among the trees for the light and air and moisture and fertility of the soil; that they protect themselves against the sun and the cold, and against the wet. They all have their struggles and their enemies as we do,— their youth, their maturity, their ripe old age.

How curious it is that the air plants should be able to get their mineral elements from the air as if this all but impalpable fluid were a soil full of lime and magnesia and silica, and the plant pushed invisible roots into it! In Florida how often I used to pause and regard them when I saw them growing upon gate-posts or dead tree-trunks and flourishing so luxuriantly! I burned some of them up to see if they left any ashes and was surprised at the amount. Is this semi-tropical air, then, so loaded with all these mineral elements? How much I wished to see the mechanical or chemical devices by which the plants seized it or strained it out of the air! A Russian chemist says that "if a linen surface moistened with an acid be placed in perfectly pure air, then the washings are found to contain sodium, calcium, iron, potassium. Linen moistened with an alkali absorbs carbonic, sulphuric, phosphoric and hydrochloric acids." The presence of organic substances in the air can be proved by similar experiments. The cosmic dust in the air from the wear and tear of the vast sidereal machinery, not detectable by any of our human senses, may also be a source of some of the mineral elements in the air plants. It is evidently by the aid of the acids in the leaf that these plants trap and appropriate the iron, the potassium, etc. The atmosphere, then, seems like another and finer earth possessing nearly all

the mineral and gaseous and living organisms — a finer world superimposed upon the world in which we live. It is the watery vapor in the air, as it is the liquid water in the earth, that holds in infinite division the various earth salts upon which the plants feed. An air plant, and an earth plant, then, do not differ so fundamentally as would at first seem — the former has its roots in the air and draws about the same elements thence that the latter does through its roots in the earth.

Is not distilled and evaporated water supposed to be absolutely free from mineral elements? How then do all these minerals get into the air, if not through the vapors that rise from the sea and the land? It is curious, if true, as is alleged, that stagnant water anywhere near air plants seems to be injurious to them. They need the purest air.

Wait long enough and Nature will always have a fresh surprise for you. I have seen in my life only one big maple tree utterly destroyed and reduced to kindling wood by a thunderbolt. I have never yet known lightning to strike a beech tree, but probably if I wait long enough I shall see it or hear of it. I have only once in my life found a plant called the Devil's bit, but in time I hope to find another of each. I have only once seen a wild bird turning over her eggs in her nest as does a hen. I have never but once seen the Golden Eagle soaring above my native hills and that was seventy years ago. No wild animal of the cat tribe other than the ordinary wild cat had been seen or heard in my native town in the Catskills in my time, till a few years ago, when a new cry was heard. Let me tell about it:

One still moonlight October night, as I was sleeping on the porch, a bit of natural history on four legs, which I had never heard before, let out such a cry and wail under the hill within a stone's throw below me, that I was startled and puzzled beyond measure. I thought I knew the natural history of the Catskills pretty well, but here was a cry absolutely new to me. There was first a loud, strident, murderous scream, such as

a boy might utter when utterly beside himself with fear or pain, followed by a long tapering moan and wail, like the plaint of a lost soul. It was almost blood-curdling. Five times, with less than half a minute interval, the creature or lost spirit rent the midnight silence with this cry, followed by the wail of utterly hopeless despair. I raised myself up on my elbow and listened. Each scream echoed off in the woods a few hundred yards away, but the moan faded away in the moonlight and became a mere wraith of sound. I could not help visualizing it, and see it mount up toward the moon and become fairly blue and transparent in its beams. I was partially disabled from the kick of a horse around whom I had become too coltish in the field the day before, and could not get up and run to the brink of the hill, below which the creature seemed to be. What could it be?

The next night it came again at about the same hour, but I was sleeping too soundly to be awakened. A young couple from Kansas were sleeping in separate beds in the chamber above me; they heard it and the wife was so scared that she got up and crept in the bed beside her husband, when her fear was communicated to him and neither of them slept any more till morning. The next night we all lay awake listening till after midnight, but the performance was not repeated. Not long after I visited the Zoölogical Park at the Bronx and described the sound I had heard to the Director. "A puma," he said, "probably one escaped from captivity and calling for her mate." The Director had heard them cry hundreds of times and he repeated the cry. "Was it like that?" "Not a bit," I said. "No human voice could give the scream I heard, or imitate the hopelessness of that wail." The only sound that I had ever heard that was at all like the cry, was uttered by a young man whom I caught one night stealing my grapes. I suddenly rose up amid the vines, draped in black, and seized him by the leg as he was trying, half paralyzed with fear, to get over the wall. He gave forth a wild, desperate-animal

scream, as if he had found himself in the clutches of a veritable black fiend. Only the wild animal which slumbers in each of us, and which fear can at times so suddenly awaken, was vocal in that cry. As for the utterly forlorn and heart-breaking crescendo of the midnight wail I heard from my sleeping-porch, I have never heard anything approaching it from man or beast.

There were traditions in the neighborhood of some such mysterious cry having been heard here and there for the past seven or eight years, frightening horses at night, causing them to tremble and snort and stop in the road, and almost paralyzing with fear a young fellow and his girl crossing from one valley to another on their way home from a country dance.

Six years ago, on a warm July night, a woman friend of mine and her son, of sixteen or eighteen, were passing the night in hammocks in my orchard, when near midnight they came hurrying to the house in a great state of agitation; they had heard a terrible blood-curdling cry. I laughed at them as city tender-feet, told them they had probably heard the squall of a fox, or the cry of an owl, or a coon. They did not care what it was, but they would not return to their hammocks, or even try to pass another night there. They have since told me that the fearful cry they heard was like the one I described.

An old woodsman and hunter has told me that I heard the cry of the Canada lynx. And he is probably correct, though I can find no record in the books that the lynx has such a cry. In the winter of 1915 a similar cry was heard late at night on the hills above the village. It set all the dogs in town barking and people thrust their heads out of their doors and windows to see or hear what had caused the sudden rumpus. The following September, while a young man whom I know was plowing in a hill field near the woods, a large, yellow, cat-like animal came down and lingered near him. His description of it, and the fact that it had a short tail, convinced me that he had seen a lynx, and that this was our mysterious night-screamer. The young farmer ran to the house to get his gun, but when

he returned he saw the big cat disappearing in the woods. Yet no one has seen its track upon the snow, and no poultry or lambs or pigs or calves in the neighborhood have been killed by it.

One need never expect to exhaust the natural history of even his own farm. Every year sees a new and enlarged edition of the book of nature, and we may never hope to turn the final leaf.

MY WINTER GARDEN

CHARLES KINGSLEY

So, my friend, you ask me to tell you how I contrive to support this monotonous country life; how, fond as I am of excitement, adventure, society, scenery, art, literature, I go cheerfully through the daily routine of a commonplace country profession, never requiring a six weeks' holiday; not caring to see the Continent, hardly even to spend a day in London; having never yet actually got to Paris.

You wonder why I do not grow dull as those round me, whose talk is of bullocks — as indeed mine is, often enough; why I am not by this time "all over blue mold"; why I have not been tempted to bury myself in my study, and live a life of dreams among old books.

I will tell you. I am a minute philosopher; though one, thank Heaven, of a different stamp from him whom the great Bishop Berkeley silenced — alas! only for a while. I am possibly, after all, a man of small mind, content with small pleasures. So much the better for me. Meanwhile, I can understand your surprise, though you cannot understand my content. You have played a greater game than mine; have lived a life perhaps more fit for an Englishman, certainly more in accordance with the taste of our common fathers, the Vikings, and their patron Odin "the goer," father of all them that go ahead. You have gone ahead, and over many lands; and I reverence you for it, though I envy you not. You have commanded a regiment — indeed an army — and "drank delight of battle with your peers"; you have ruled provinces, and done justice and judgment, like a noble Englishman as you are, old friend, among thousands

who never knew before what justice and judgment were. You have tasted (and you have deserved to taste) the joy of old David's psalm, when he has hunted down the last of the robber lords of Palestine. You have seen "a people whom you have not known serve you. As soon as they heard of you, they obeyed you; but the strange children dissembled with you"; yet before you, too, "the strange children failed, and trembled in their hill-forts."

Noble work that was to do, and nobly you have done it; and I do not wonder that to a man who has been set to such a task, and given power to carry it through, all smaller work must seem paltry; that such a man's very amusements, in that grand Indian land, and that free, adventurous Indian life, exciting the imagination, calling out all the self-help and daring of a man, should have been on a par with your work; that when you go a-sporting, you ask for no meaner preserve than the primeval forest, no lower park wall than the snow-peaks of the Himalaya.

Yes; you have been a "burra Shikarree"¹ as well as a "burra Sahib."² You have played the great game in your work, and killed the great game in your play. How many tons of mighty monsters have you done to death, since we two were school-boys together, five-and-twenty years ago? How many starving villages have you fed with the flesh of elephant or buffalo? How many have you delivered from man-eating tigers, or wary old alligators, their craws full of poor girls' bangles? Have you not been charged by rhinoceroses, all but ripped up by boars? Have you not seen face to face *Ovis Ammon* himself, the giant mountain sheep — primeval ancestor, perhaps, of all the flocks on earth? Your memories must be like those of Theseus and Hercules, full of slain monsters. Your brains must be one fossiliferous deposit, in which gaur and sambur, hog and tiger, rhinoceros and elephant, lie heaped together, as the old ichthyosaurs and plesiosaurs are heaped in the lias

¹ Great hunter.

² Great gentleman.

rocks at Lyme. And therefore I like to think of you. I try to picture your feelings to myself. I spell over with my boy Mayne Reid's amusing books, or the *Old Forest Ranger*, or Williams's old *Tiger Book*, with Howitt's plates; and try to realize the glory of a burra Shikarree: and as I read and imagine, feel, with Sir Hugh Evans, "a great disposition to cry."

For there were times, full many a year ago, when my brains were full of bison and grizzly bear, mustang and big-horn, Blackfoot and Pawnee, and hopes of wild adventure in the Far West, which I shall never see; for ere I was three-and-twenty I discovered, plainly enough, that my lot was to stay at home and earn my bread in a very quiet way; that England was to be henceforth my prison or my palace as I should choose to make it; and I have made it, by Heaven's help, the latter.

I will confess to you, though, that in those first heats of youth, this little England — or rather this little patch of moor in which I have struck roots as firm as the wild fir-trees do — looked at moments rather like a prison than a palace; that my foolish young heart would sigh, "Oh! that I had wings" — not as a dove, to fly home to its nest and croodle there — but as an eagle, to swoop away over land and sea, in a rampant and self-glorifying fashion, on which I now look back as altogether unwholesome and undesirable. But the thirst for adventure and excitement was strong in me, as perhaps it ought to be in all at twenty-one. Others rambled over Alps and Apennines, Italian picture-galleries and palaces, filling their minds with fair memories — why should not I? Others discovered new wonders in botany and zoölogy — why should not I? Others too, like you, fulfilled to the utmost that strange lust after the burra shikar, which even now makes my pulse throb as often as I see the stags' heads in our friend A——'s hall — why should not I? It is not learned in a day, the golden lesson of the old Collect, to "love the thing which is commanded, and desire that which is promised." Not in a day, but in fifteen years, one can spell out a little of its worth; and when one

finds one's self on the wrong side of forty, and the first gray hairs begin to show on the temples, and one can no longer jump as high as one's third button — scarcely, alas! to any button at all; and what with innumerable sprains, bruises, soakings, and chillings, one's lower limbs feel in a cold thaw, much like an old post-horse's, why, one makes a virtue of necessity; and if one still lusts after sights, takes the nearest, and looks for wonders, not in the Himalayas or Lake Ngami, but in the turf on the lawn and the brook in the park; and with good Alphonse Karr enjoys the macro-microcosm in one "*Tour autour de mon jardin.*"¹

For there it is, friend, the whole infinite miracle of nature in every tuft of grass, if we have only eyes to see it, and can disabuse our minds of that tyrannous phantom of size. Only recollect that great and small are but relative terms; that, in truth, nothing is great or small, save in proportion to the quantity of creative thought which has been exercised in making it; that the fly who basks upon one of the trilithons of Stonehenge is in truth infinitely greater than all Stonehenge together, though he may measure the tenth of an inch, and the stone on which he sits five-and-twenty feet. You differ from me? Be it so. Even if you prove me wrong I will believe myself in the right: I cannot afford to do otherwise. If you rob me of my faith in "minute philosophy," you rob me of a continual source of content, surprise, delight.

So go your way and I mine, each working with all his might, and playing with all his might, in his own place and way. Remember only, that though I never can come round to your sphere, you must some day come round to me, when wounds, or weariness, or merely, as I hope, a healthy old age, shall shut you out for once and for all from burra shikar, whether human or quadruped. For you surely will not take to politics in your old age? You will not surely live to solicit (as many a fine fellow, alas! did but last year) the votes, not even of the people, but merely

¹ Turn about my garden.

of the snobocracy, on the ground of your having neither policy nor principles, nor even opinions, upon any matter in heaven or earth? Then in that day will you be forced, my friend, to do what I have done this many a year: to refrain your soul, and keep it low. You will see more and more the depth of human ignorance, the vanity of human endeavors. You will feel more and more that the world is going God's way, and not yours, or mine, or any man's; and that if you have been allowed to do good work on earth, that work is probably as different from what you fancy it as the tree is from the seed whence it springs. You will grow content, therefore, not to see the real fruit of your labors; because if you saw it you would probably be frightened at it, and what is very good in the eyes of God would not be very good in yours; content, also, to receive your discharge, and work and fight no more, sure that God is working and fighting, whether you are in hospital or in the field. And with this growing sense of the pettiness of human struggles will grow on you a respect for simple labors, a thankfulness for simple pleasures, a sympathy with simple people, and possibly, my trusty friend, with me and my little tours about that moorland which I call my winter garden, and which is to me as full of glory and of instruction as the Himalaya or the Punjab are to you, and in which I contrive to find as much health and amusement as I have time for — and who ought to have more?

I call the said garden mine, not because I own it in any legal sense (for only in a few acres have I a life interest), but in that higher sense in which ten thousand people can own the same thing, and yet no man's right interfere with another's. To whom does the Apollo Belvedere belong, but to all who have eyes to see its beauty? So does my winter garden; and therefore to me among the rest.

Besides (which is a gain to a poor man), my pleasure in it is a very cheap one. So are all those of a minute philosopher, except his microscope. But my winter garden, which is far larger, at all events, than that famous one at Chatsworth,

costs me not one penny in keeping up. Poor, did I call myself? Is it not true wealth to have all I want without paying for it? Is it not true wealth, royal wealth, to have some twenty gentlemen and noblemen, nay, even royal personages, planting and improving for me? Is it not more than royal wealth to have sun and frost, Gulf Stream and southwester, laws of geology, phytology, physiology, and other ologies — in a word, the whole universe and the powers thereof, day and night, paving, planting, roofing, lighting, coloring my winter garden for me, without my even having the trouble to rub a magic ring and tell the genii to go to work?

Yes. I am very rich, as every man may be who will. In the doings of our little country neighborhood I find tragedy and comedy, too fantastic, sometimes too sad, to be written down. In the words of those whose talk is of bullocks I find the materials of all possible metaphysic, and long weekly that I had time to work them out. In fifteen miles of moorland I find the materials of all possible physical science, and long that I had time to work out one smallest segment of that great sphere. How can I be richer, if I have lying at my feet all day a thousand times more wealth than I can use?

Some people — most people — in these runabout railway days, would complain of such a life, in such a "narrow sphere," so they call it, as monotonous. Very likely it is so. • But is it to be complained of on that account? Is monotony in itself an evil? Which is better, to know many places ill or to know one place well? Certainly — if a scientific habit of mind be a gain — it is only by exhausting as far as possible the significance of an individual phenomenon (is not that sentence a true scientific one in its magniloquence?) that you can discover any glimpse of the significance of the universal. Even men of boundless knowledge, like Humboldt, must have once their specialty, their pet subject, or they would have, strictly speaking, no knowledge at all. The volcanoes of Mexico, patiently and laboriously investigated in his youth, were to Humboldt,

possibly, the key of the whole Cosmos. I learn more studying than I should by roaming all Europe in search of new geologic wonders. Fifteen years have I been puzzling at the same questions and have only guessed at a few of the answers. What sawed out the edges of the moors into long narrow banks of gravel? What cut them off all flat atop? What makes *Erica tetralix* grow in one soil and the bracken in another? How did three species of club-moss — one of them quite an Alpine one — get down here, all the way from Wales perhaps, upon this isolated patch of gravel? Why did that one patch of *Carex arenaria* settle in the only square yard for miles and miles which bore sufficient resemblance to its native sand-hill by the seashore, to make it comfortable? Why did *Myosurus minimus*, which I had hunted for in vain for fourteen years, appear by dozens in the fifteenth, upon a new-made bank, which had been for at least two hundred years a farm-yard gateway? Why does it generally rain here from the southwest, not when the barometer falls, but when it begins to rise again? Why — why is everything which lies under my feet all day long? I don't know; and you can't tell me. And till I have found out, I cannot complain of monotony, with still undiscovered puzzles waiting to be explained, and so to create novelty at every turn.

Besides, monotony is pleasant in itself; morally pleasant and morally useful. Marriage is monotonous; but there is much, I trust, to be said in favor of holy wedlock. Living in the same house is monotonous; but three removes, say the wise, are as bad as a fire. Locomotion is regarded as an evil by our Litany. The Litany, as usual, is right. "Those who travel by land or sea" are to be objects of our pity and our prayers; and I do pity them. I delight in that same monotony. It saves curiosity, anxiety, excitement, disappointment, and a host of bad passions. It gives the man the blessed, invigorating feeling that he is at home; that he has roots, deep and wide, struck down into all he sees; and that only The Being who will do nothing cruel or useless can tear them up. It is pleasant

to look down on the same parish day after day, and say, I know all that lies beneath, and all beneath know me. If I want a friend, I know where to find him; if I want work done, I know who will do it. It is pleasant and good to see the same trees year after year; the same birds coming back in spring to the same shrubs; the same banks covered with the same flowers, and broken (if they be stiff ones) by the same gaps. Pleasant and good it is to ride the same horse, to sit in the same chair, to wear the same old coat. That man who offered twenty pounds' reward for a lost carpet-bag full of old boots was a sage, and I wish I knew him. Why should one change one's place any more than one's wife or one's children? Is a hermit-crab, slipping his tail out of one strange shell into another, in the hopes of its fitting him a little better, either a dignified, safe, or graceful animal? No; George Riddler was a true philosopher:

"Let vules go sarching vur and nigh,
We bides at Whum, my dog and I;"

and become there, not only wiser, but more charitable; for the oftener one sees, the better one knows; and the better one knows, the more one loves.

It is an easy philosophy; especially in the case of the horse, where a man cannot afford more than one, as I cannot. To own a stud of horses, after all, is not to own horses at all, but riding-machines. Your rich man who rides Crimea in the morning, Sir Guy in the afternoon, and Sultan to-morrow, and something else the next day, may be a very gallant rider; but it is a question whether he enjoys the pleasure which one horse gives to the poor man who rides him day after day; one horse, who is not a slave, but a friend; who has learned all his tricks of voice, hand, heel, and knows what his master wants, even without being told; who will bear with his master's infirmities, and feels secure that his master will bear with his in turn.

Possibly, after all, the grapes are sour; and were one rich, one would do even as the rich are wont to do; but still, I am

a minute philosopher. And therefore, this afternoon, after I have done the same work, visited the same people, and said the same words to them, which I have done for years past, and shall, I trust, for many a year to come, I shall go wandering out into the same winter garden on the same old mare; and think the same thoughts, and see the same fir-trees, and meet perhaps the same good fellows hunting of their fox, as I have done with full content this many a year; and rejoice, as I said before, in my own boundless wealth, who have the whole universe to look at, without being charged one penny for the show.

As I have said, the grapes may be sour, and I enjoy the want of luxuries only because I cannot get them; but if my self-deception be useful to me, leave it alone.

No one is less inclined to depreciate that magnificent winter garden at the Crystal Palace: yet let me, if I choose, prefer my own; I argue that, in the first place, it is far larger. You may drive, I hear, through the grand one at Chatsworth for a quarter of a mile. You may ride through mine for fifteen miles on end. I prefer, too, to any glass roof which Sir Joseph Paxton ever planned, that dome above my head some three miles high, of soft dappled gray and yellow cloud, through the vast lattice-work whereof the blue sky peeps, and sheds down tender gleams on yellow bogs, and softly rounded heather knolls, and pale chalk ranges gleaming far away. But, above all, I glory in my evergreens. What winter garden can compare for them with mine? True, I have but four kinds — Scotch fir, holly, furze, and the heath; and by way of relief to them, only brows of brown fern, sheets of yellow bog-grass, and here and there a leafless birch, whose purple tresses are even more lovely to my eye than those fragrant green ones which she puts on in spring. Well: in painting as in music, what effects are more grand than those produced by the scientific combination, in endless new variety, of a few simple elements? Enough for me is the one purple birch; the bright hollies round its stem sparkling with scarlet beads; the furze-patch, rich with its

lacework of interwoven light and shade, tipped here and there with a golden bud; the deep soft heather carpet, which invites you to lie down and dream for hours; and, behind all, the wall of red fir-stems, and the dark fir-roof with its jagged edges a mile long, against the soft gray sky.

An ugly, straight-edged, monotonous fir-plantation? Well, I like it, outside and inside. I need no saw-edge of mountain peaks to stir up my imagination with the sense of the sublime, while I can watch the saw-edge of those fir peaks against the red sunset. They are my Alps; little ones it may be: but after all, as I asked before, what is size? A phantom of our brain; an optical delusion. Grandeur, if you will consider wisely, consists in form, and not in size: and to the eye of the philosopher, the curve drawn on a paper two inches long is just as magnificent, just as symbolic of divine mysteries and melodies, as when embodied in the span of some cathedral roof. Have you eyes to see? Then lie down on the grass, and look near enough to see something more of what is to be seen; and you will find tropic jungles in every square foot of turf, mountain cliffs and debacles at the mouth of every rabbit burrow; dark strids, tremendous cataracts, "deep glooms and sudden glories," in every foot-broad rill which wanders through the turf. All is there for you to see, if you will but rid yourself of "that idol of space"; and Nature, as every one will tell you who has seen dissected an insect under the microscope, is as grand and graceful in her smallest as in her hugest forms.

The March breeze is chilly: but I can be always warm if I like in my winter garden. I turn my horse's head to the red wall of fir-stems, and leap over the furze-grown bank into my cathedral, wherein if there be no saints, there are likewise no priestcraft and no idols; but endless vistas of smooth, red, green-veined shafts holding up the warm dark roof, lessening away into endless gloom, paved with rich brown fir-needle — a carpet at which Nature has been at work for forty years. Red shafts, green roof, and here and there a pane of blue sky —

neither Owen Jones nor Willement can improve upon that ecclesiastical ornamentation — while for incense I have the fresh healthy turpentine fragrance, far sweeter to my nostrils than the stifling narcotic odor which fills a Roman Catholic cathedral. There is not a breath of air within: but the breeze sighs over the roof above in a soft whisper. I shut my eyes and listen. Surely that is the murmur of the summer sea upon the summer sands in Devon far away. I hear the innumerable wavelets spend themselves gently upon the shore, and die away to rise again. And with the innumerable wave-sighs come innumerable memories, and faces which I shall never see again upon this earth. I will not tell even you of that, old friend.

It has two notes, two keys rather, that Æolian harp of fir-needles above my head; according as the wind is east or west, the needles dry or wet. This easterly key of to-day is shriller, more cheerful, warmer in sound, though the day itself be colder: but grander still, as well as softer, is the sad soughing key in which the southwest wind roars on, rain-laden, over the forest, and calls me forth — being a minute philosopher — to catch trout in the nearest chalk-stream.

The breeze is gone awhile, and I am in perfect silence — a silence which may be heard. Not a sound and not a moving object — absolutely none. The absence of animal life is solemn, startling. That ring-dove who was cooing half a mile away has hushed his moan; that flock of long-tailed titmice, which were twinging and pecking about the fir-cones a few minutes since, are gone; and now there is not even a gnat to quiver in the slant sun-rays. Did a spider run over these dead leaves, I almost fancy I could hear his footfall. The creaking of the saddle, the soft step of the mare upon the fir-needles, jar my ears. I seem alone in a dead world. A dead world: and yet so full of life, if I had eyes to see! Above my head every fir-needle is breathing — breathing forever; currents unnumbered circulate in every bough, quickened by some undiscovered miracle; around me every fir-stem is distilling strange juices, which no laboratory

of man can make; and where my dull eye sees only death, the eye of God sees boundless life and motion, health and use.

Slowly I wander on beneath the warm roof of the winter garden, and meditate upon that one word — Life; and specially on all that Mr. Lewes has written so well thereon — for instance:

“We may consider Life itself as an ever-increasing identification with Nature. The simple cell, from which the plant or animal arises, must draw light and heat from the sun, nutriment from the surrounding world, or else it will remain quiescent, not alive, though latent with life; as the grains in the Egyptian tombs, which after lying thousands of years in those sepulchres, are placed in the earth, and smile forth as golden wheat. What we call growth, is it not a perpetual absorption of Nature, the identification of the individual with the universal? And may we not, in speculative moods, consider Death as the grand impatience of the soul to free itself from the circle of individual activity — the yearning of the creature to be united with the Creator?

“As with Life, so with knowledge, which is intellectual life. In the early days of man’s history, Nature and her marvelous ongoings were regarded with but a casual and careless eye, or else with the merest wonder. It was late before profound and reverent study of her laws could wean man from impatient speculations; and now, what is our intellectual activity based on, except on the more thorough mental absorption of Nature? When that absorption is completed the mystic drama will be sunny clear, and all Nature’s processes be visible to man, as a Divine Effluence and Life.”

True: yet not all the truth. But who knows all the truth?

Not I. “We see through a glass darkly,” said St. Paul of old; and what is more, dazzle and weary our eyes, like clumsy microscopists, by looking too long and earnestly through the imperfect and by no means achromatic lens. Enough. I will think of something else. I will think of nothing at all —

Stay. There was a sound at last; a light footfall.

A hare races towards us through the ferns, her great bright eyes full of terror, her ears aloft to catch some sound behind. She sees us, turns short, and vanishes into the gloom. The mare pricks up her ears too, listens, and looks; but not the way the hare has gone. There is something more coming; I can trust the finer sense of the horse, to which (and no wonder) the Middle Age attributed the power of seeing ghosts and fairies impalpable to man's gross eyes. Besides, that hare was not traveling in search of food. She was not loping along, looking around to her right and left; but galloping steadily. She has been frightened; she has been put up; but what has put her up? And there, far away among the fir-stems, rings the shriek of a startled blackbird. What has put him up?

That, old mare, at sight whereof your wise eyes widen till they are ready to burst, and your ears are first shot forward towards your nose, and then laid back with vicious intent. Stand still, old woman! Do you think still, after fifteen winters, that you can catch a fox?

A fox it is indeed; a great dog-fox, as red as the fir-stems between which he glides. And yet his legs are black with fresh peat-stains.

He is a hunted fox; but he has not been up long.

The mare stands like a statue; but I can feel her trembling between my knees. Positively he does not see us. He sits down in the middle of a ride, turns his great ears right and left, and then scratches one of them with his hind foot, seemingly to make it hear the better. Now he is up again and on.

Beneath yon firs, some hundred yards away, standeth, or rather lieth, for it is on dead flat ground, the famous castle of Malepartus, which beheld the base murder of Lampe the hare, and many a seely soul besides. I knew it well; a patch of sand-heaps mingles with great holes, amid the twining fir-roots; ancient home of the last of the wild beasts. And thither, unto Malepartus safe and strong, trots Reinecke, where he hopes to be snug among the labyrinthine windings and innumerable

starting-holes, as the old apologue has it, of his ballium, covert-way, and donjon keep. Full blown in self-satisfaction he trots, lifting his toes delicately, and carrying his brush aloft, as full of cunning and conceit as that world-famous ancestor of his, whose deeds of unchivalry were the delight, if not the model, of knight and kaiser, lady and burgher, in the Middle Age.

Suddenly he halts at the great gate of Malepartus; examines it with his nose; goes on to a postern; examines that also, and then another and another; while I perceive afar, projecting from every cave's mouth, the red and green end of a new fir-faggot. Ah, Reinecke! fallen is thy conceit, and fallen thy tail therewith. Thou hast worse foes to deal with than Bruin the bear, or Isegrim the wolf, or any foolish brute whom thy great ancestor outwitted. Man, the many-counseled, has been beforehand with thee; and the earths are stopped.

One moment he sits down to meditate, and scratches those trusty counselors, his ears, as if he would tear them off, "revolving swift thoughts in a crafty mind."

He has settled it now. He is up and off — and at what a pace! Out of the way, Fauns and Hamadryads, if any be left in the forest! What a pace! And with what a grace besides!

O Reinecke, beautiful thou art, of a surety, in spite of thy great naughtiness! Art thou some fallen spirit, doomed to be hunted for thy sins in this life, and in some future life rewarded for thy swiftness, and grace, and cunning, by being made a very messenger of the immortals? Who knows? Not I.

I am rising fast to Pistol's vein. Shall I ejaculate? Shall I notify? Shall I waken the echoes? Shall I break the grand silence by that scream which the vulgar view-halloo call?

It is needless; for louder and louder every moment swells up a sound which makes my heart leap into my mouth and my mare into the air.

Music? Well-beloved soul of Hullah, would that thou wert here this day, and not in St. Martin's Hall, to hear that chorus, as it pours round the fir-stems, rings against the roof

above, shatters up into a hundred echoes, till the air is alive with sound! You love madrigals, and whatever Weekes, or Wilbye, or Orlando Gibbons sang of old. So do I. Theirs is music fit for men: worthy of the age of heroes, of Drake and Raleigh, Spenser and Shakespeare: but oh, that you could hear this madrigal! If you must have "four parts," then there they are: deep-mouthed bass, rolling along the ground; rich, joyful tenor; wild, wistful alto; and leaping up here and there above the throng of sounds, delicate treble shrieks and trills of trembling joy. I know not whether you can fit it into your laws of music, any more than you can the song of the Ariel sprite who dwells in the Æolian harp, or the roar of the waves on the rock, or

"Myriads of rivulets hurrying through the lawn,
And murmuring of innumerable bees."

But music it is. A madrigal? Rather a whole opera of *Der Freischütz*¹ — demoniac element and all — to judge by those red lips, fierce eyes, wild, hungry voices; and such as should make Reinecke, had he strong æsthetic sympathies, well content to be hunted from his cradle to his grave, that such sweet sounds might by him enrich the air. Heroes of old were glad to die, if but some *vates-sacer* would sing their fame in worthy strains: and shall not thou too be glad, Reinecke? Content thyself with thy fate. Music soothes care; let it soothe thine, as thou runnest for thy life; thou shalt have enough of it in the next hour. For as the Etruscans (says Athenæus) were so luxurious that they used to flog their slaves to the sound of the flute, so shall luxurious Chanter and Challenger, Sweetlips and Melody, eat thee to the sound of rich organ-pipes, that so thou mayest.

"Like that old baffled swan, in music die."

¹ 1821. Music by Weber, libretto by Kind. *Freischütz* — from folklore — is a marksman who by compact with the devil has obtained a certain number of bullets destined to hit without fail whatever object he wishes.

And now appear, dim at first and distant, but brightening and nearing fast, many a right good fellow and many a right good horse. I know three out of four of them, their private histories, the private histories of their horses; and could tell you many a good story of them; but shall not, being an English gentleman, and not an American *litterateur*. They may not all be very clever, or very learned, or very anything except gallant men; but they are all good enough company for me, or anyone; and each has his own *specialité*, for which I like him. That huntsman I have known for fifteen years, and sat many an hour beside his father's death-bed. I am godfather to that whip's child. I have seen the servants of the hunt, as I have the hounds, grow up round me for two generations, and I feel for them as old friends; and like to look into their brave, honest, weatherbeaten faces. That red coat there, I knew him when he was a schoolboy; and now he is a captain in the Guards, and won his Victoria Cross at Inkermann; that bright green coat is the best farmer, as well as the hardest rider, for many a mile round; one who plays, as he works, with all his might, and might have been a *beau sabreur* and colonel of dragoons. So might that black coat, who now brews good beer, and stands up for the poor at the Board of Guardians, and rides, like the green coat, as well as he works. That other black coat is a county banker; but he knows more of the fox than the fox knows of himself, and where the hounds are, there will he be this day. That red coat has hunted kangaroo in Australia: that one, as clever and good as he is brave and simple, has stood by Napier's side in many an Indian fight; that one won his Victoria at Delhi, and was cut up at Lucknow, with more than twenty wounds; that one has — but what matter to you who each man is? Enough that each can tell one a good story, welcome one cheerfully, and give one out here, in the wild forest, the wholesome feeling of being at home among friends.

There is music, again, if you will listen, in the soft tread of

these hundred horse-hoofs upon the spongy vegetable soil. They are trotting now in "common time." You may hear the whole Croats' March (the finest trotting march in the world) played by those iron heels; the time, as it does in the Croats' March, breaking now and then, plunging, jingling, struggling through heavy ground, bursting for a moment into a jubilant canter as it reaches a sound spot.

The hounds feather a moment round Malepartus, puzzled by the windings of Reinecke's footsteps. You can hear the flap and snort of the dogs' nostrils as they canter round; and one likes it. It is exciting; but why — who can tell?

What beautiful creatures they are too! Next to a Greek statue (I mean a real old Greek one: for I am a thoroughly anti-pre-Raphaelite benighted pagan heathen in taste, and intend some day to get up a Cinque-Cento Club, for the total abolition of Gothic art) — next to a Greek statue, I say, I know few such combinations of grace and strength as in a fine fox-hound. It is the beauty of the Theseus — light and yet massive; and light not in spite of its masses, but on account of the perfect disposition of them. I do not care for grace in man, woman, or animal, which is obtained (as in the old painters) at the expense of honest flesh and blood. It may be all very pure, and unearthly, and saintly, and what not; but it is not healthy; and, therefore, it is not really high art, let it call itself such as much as it likes. The highest art must be that in which the outward is the most perfect symbol of the inward; and, therefore, a healthy soul can only be expressed by a healthy body; and starved limbs and a hydrocephalous forehead must be taken either as incorrect symbols of spiritual excellence, or as — what they were really meant for — symbols of certain spiritual diseases which were in the Middle Age considered as ecclesiastical graces and virtues. Wherefore I like pagan and naturalist art; consider Titian and Correggio as unappreciated geniuses, whose excellence the world will in some saner mood rediscover; hold, in direct opposition to Rio, that Raphael

improved steadily all his life through, and that his noblest works are not his somewhat simpering Madonnas and somewhat impish Bambinos (very lovely though they are), but his great, coarse, naturalist, Protestant cartoons, which (with Andrea Mantegna's "Heathen Triumph") Cromwell saved for the British nation. Probably no one will agree with all this for the next quarter of a century; but after that I have hopes. The world will grow tired of pretending to admire Manichæan pictures in an age of natural science; and Art will let the dead bury their dead, and beginning again where Michael Angelo and Raphael left off, work forward into a nobler, truer, freer, and more divine school than the world had yet seen — at least, so I hope.

And all this has grown out of those fox-hounds. Why not? Theirs is the sort of form which expresses to me what I want art to express — nature not limited, but developed, by high civilization. The old savage ideal of beauty was the lion, type of mere massive force. That was succeeded by an over-civilized ideal, say from fawn, type of delicate grace. By cunning breeding and choosing, through long centuries, man has combined both, and has created the fox-hound-lion and fawn in one; just as he might create noble human beings, did he take half as much trouble about politics (in the true old sense of the word) as he does about fowls. Look at that old hound, who stands doubtful, looking up at his master for advice. Look at the severity, delicacy, lightness of every curve. His head is finer than a deer's; his hind legs tense as steel springs; his fore legs straight as arrows: and yet see the depth of chest, the sweep of loin, the breadth of paw, the mass of arm and thigh; and if you have an eye for form, look at the absolute majesty of his attitude at this moment. Majesty is the only word for it. If he were six feet high, instead of twenty-three inches, with what animal on earth could you compare him? Is it not a joy to see such a thing alive? It is to me, at least. I should like to have one in my study all day long, as I would have a

statue or a picture; and when Mr. Morrell gave (as they say) two hundred guineas for Hercules alone, I believe the dog was well worth the money, only to look at. But I am a minute philosopher.

I cap them on to the spot at which Reinecke disappeared. Old Virginal's stern flourishes; instantly her pace quickens. One whimper, and she is away full-mouthed through the wood, and the pack after her; but not I.

I am not going with them. My hunting days are over. Let it suffice that I have, in the days of my vanity, "drunk delight of battle with my peers, far on the ringing plains" of many a county, grass and forest, down and vale. No, my gallant friends. You know that I could ride, if I chose; and I am vain enough to be glad that you know it. But useless are your coaxings, solicitations, wavings of honest right hands. "Life," as my friend Tom Brown says, "is not all beer and skittles"; it is past two now and I have four old women to read to at three, and an old man to bury at four; and I think, on the whole, that you will respect me the more for going home and doing my duty. That I should like to see this fox fairly killed, or even fairly lost, I deny not. That I should like it as much as I can like any earthy and outward thing, I deny not. But sugar to one's bread and butter is not good; and if my winter garden represent the bread and butter, then will fox-hunting stand to it in the relation of superfluous and unwholesome sugar; so farewell; and long may your noble sport prosper — "the image of war with only half its danger," to train you and your sons after, into gallant soldiers — full of

"The reason firm, the temperate will,
Endurance, foresight, strength, and skill."

So homeward I go through a labyrinth of fir-stem and, what is worse, fir-stumps, which need both my eyes and my horse's at every moment; and woe to the "anchorite," as old Bunbury names him, who carries his nose in the air, and his fore feet well

under him. Woe to the self-willed or hard-hided horse who cannot take the slightest hint of the heel, and wince hind legs or fore out of the way of those jagged points which lie in wait for him. Woe, in fact, to all who are clumsy or cowardly, or in any wise not "masters of the situation."

Pleasant riding it is, though, if you dare look anywhere but over your horse's nose, under the dark roof, between the red fir-pillars, in that rich subdued light. Now I plunge into a gloomy dell, wherein is no tingling rivulet, ever pure; but instead a bog, hewn out into a chess-board of squares, parted by deep narrow ditches some twenty feet apart. Blundering among the stems I go, fetlock-deep in peat, and jumping at every third stride one of the said uncanny gripes, half hidden in long hassock grass. *O Aira cæspitosa*, most stately and most variable of British grasses, why will you always grow where you are not wanted? Through you the mare all but left her hind legs in that last gripe. Through you a red coat ahead of me, avoiding one of your hassocks, jumped with his horse's nose full but against a fir-stem, and stopped,

"As one that is struck dead
By lightning ere he falls,"

as we shall soon, in spite of the mare's cleverness. Would we were out of this!

Out of it we shall be soon. I see daylight ahead at last, bright between the dark stems. Up a steep slope, and over a bank which is not very big, but being composed of loose gravel and peat mold gives down with me, nearly sending me head over heels in the heather, and leaving me a sheer gap to scramble through, and out on the open moor.

Grand old moor! stretching your brown flats right away toward Windsor for many a mile. Far to our right is the new Wellington College, looking stately enough here all alone in the wilderness, in spite of its two ugly towers and pinched waist. Close over me is the long fir-fringed ride of Easthampstead,

ending suddenly in Cæsar's camp; and hounds and huntsmen are already far ahead, and racing up the Roman road, which the clods of these parts, unable to give a better account of it, call the Devil's Highway.

Racing indeed; for as Reinecke gallops up the narrow heather-fringed pathway, he brushes off his scent upon the twigs at every stride; and the hounds race after him, showing no head indeed, and keeping, for convenience, in one long line upon the track; but going heads up, sterns down, at a pace which no horse can follow. I only hope they may not overrun the scent.

They have overrun it, halt, and put their heads down a moment. But with one swift cast in full gallop they have hit it off again, fifty yards away in the heather, long ere the horsemen are up to them; for those hounds can hunt a fox because they are not hunted themselves, and so have learned to trust themselves, and act for themselves; as boys should learn at school, even at the risk of a mistake or two. Now they are showing head indeed, down a half-cleared valley, and over a few ineffectual turnips withering in the peat, a patch of growing civilization in the heart of the wilderness; and then over the brook, while I turn slowly away, through a green wilderness of self-sown firs.

There they stand in thousands, the sturdy Scots, colonizing the desert in spite of frost, and gales, and barrenness; and clustering together, too, as Scotsmen always do abroad, little and big, every one under his neighbor's lee, according to the good old proverb of their native land, "Caw me, and I'll caw thee."

I respect them, those Scotch firs. I delight in their forms, from James I's gnarled giants up in Bramshill Park — the only place in England where a painter can learn what Scotch firs are — down to the little pyramids which stand up out of the heather, triumphant over tyranny, and the strange woes of an untoward youth. Seven years on an average have most of them spent

in ineffectual efforts to become a foot high. Nibbled off by hares, trodden down by cattle, cut down by turf-parers, seeing hundreds of their brethren cut up and carried off in the turf-fuel, they are as gnarled and stubbed near the ground as an old thorn-bush in a pasture. But they have conquered at last, and are growing away, eighteen inches a year, with fair green brushes silver-tipped, reclothing the wilderness with a vegetation which it has not seen for — how many thousand years?

No man can tell. For when last the Scotch fir was indigenous to England, and, mixed with the larch, stretched in one vast forest from Norfolk into Wales, England was not as it is now. Snowdon was, it may be, fifteen thousand feet in height, and from the edges of its glaciers the marmot and the musk-ox, the elk and the bear, wandered down into the lowlands, and the hyena and the lion dwelt in those caves where fox and badger only now abide. And how did the Scotch fir die out? Did the whole land sink slowly from its sub-Alpine elevation into a warmer climate below? Or was it never raised at all? Did some change of the Atlantic sea-floor turn for the first time the warm Gulf Stream to these shores and with its soft sea-breezes melt away the "Age of Ice," till glaciers and pines, marmots and musk-oxen, perspired to death, and vanished for an *æon*? Who knows? Not I. But of the fact there can be no doubt. Whether, as we hold traditionally here, the Scotch fir was reintroduced by James I when he built Bramshill for Raleigh's hapless pet, Henry the Prince, or whatever may have been the date of their reintroduction, here they are, and no one can turn them out. In countless thousands the winged seeds float down the southwest gales from the older trees; and every seed which falls takes root in ground which, however unable to bear broad-leaved trees, is ready by long rest for the seeds of the needle-leaved ones. Thousands perish yearly; but the eastward march of the whole, up hill and down dale, is sure and steady as that of Lynceus's Goths in Goethe's "*Helena*" —

“Ein lang und breites Volksgewicht,¹
Der erste wusste vom letzten nicht.

Der erste fiel, der zweite stand,
Des dritten Lanze war zur Hand,
Ein jeder hundertfach gestärkt;
Erschlagene Tausend unbemerkt,”

— till, as you stand upon some eminence, you see, stretching to the eastward of each tract of older trees, a long cloud of younger ones, like a green comet's tail — I wish their substance was as yielding this day. Truly beautiful — grand indeed to me it is — to see young live Nature thus carrying on a great savage process in the heart of this old and seemingly all-artificial English land; and reproducing here, as surely as in the Australian bush, a native forest, careless of mankind. Still, I wish it were easier to ride through. Stiff are those Scotchmen, and close and stout they stand by each other, and claw at you as you twist through them, the biggest aiming at your head, or, even worse, at your knees; while the middle-sized slip their brushes between your thigh and the saddle; and the little babies tickle your horse's stomach, or twine about his fore feet. Whish — whish; we are enveloped in what seems an atmosphere of scrubbing-brushes. Fain would I shut my eyes; but dare not, or I shall ride against a tree. Whish — whish; alas for the horse which cannot wind and turn like a hare! Plunge — stagger. What is this? A broad line of ruts; perhaps some Celtic trackway, two thousand years old, now matted over with firs; dangerous enough out on the open moor, when only masked by a line of higher and

¹ So long and broad the people massed,
The foremost knew not of the last.

The foremost fell, the second stood;
The third one's lance was prompt and good;
Each one a hundred's strength supplied:
Unnoted thousands fell and died.

From Bayard Taylor's translation.
Faust, Part II, Act 3.

darker heath, but doubly dangerous now when masked by dark undergrowth. You must find your own way here, mare. I will positively have nothing to do with it. I disclaim all responsibility. There are the reins on your neck; do what you will, only do something — and if you can, get forward, and not back.

There is daylight at last, and fresh air. I trot contemptuously through the advanced skirmishers of the Scotch invading army; and watch my friends some mile and a half off, who have threaded a practicable trackway through a long, dreary, yellow bog, too wet for firs to root in, and are away in "a streamer." Now a streamer is produced in this wise. There is but one possible gap in a bank, one possible ford in a brook; one possible path in a cover; and as each man has to wait till the man before him gets through, and then gallops on, each man loses twenty yards or more on the man before him: wherefore, by all laws of known arithmetic, if ten men tail through a gap, then will the last of the ten find two hundred yards behind the foremost, which process, several times repeated, produces the phenomenon called a streamer, viz., twenty men galloping absurdly as hard as they can, in a line half a mile long, and in humors which are celestial in the few foremost, contented in the central, and gradually becoming darker in the hindmost; till in the last man they assume a hue altogether Tartarean. Farewell, brave gentlemen! I watch, half sadly, half self-contented, the red coats scattered like sparks of fire over hill and dale, and turn slowly homeward, to visit my old women.

I pass through a gateway, out upon a village green, planted with rows of oaks, surrounded by trim, sunny cottages, a pleasant oasis in the middle of the wilderness. Across the village cricket-ground — we are great cricketers in these parts, and long may the good old game live among us; and then up another hollow lane, which leads between damp shaughs and copses toward the further moor.

Curious things to a minute philosopher are these same hollow lanes. They set him on archæological questions, more than he

can solve; and I meditate as I go, how many centuries it took to saw through the warm sandbanks this dyke ten feet deep, up which he trots, with the oak-boughs meeting over his head. Was it ever worth men's while to dig out the soil? Surely not. The old method must have been to remove the softer upper spit, till they got to tolerably hard ground; and then, Macadam's metal being as yet unknown, the rains and the wheels of generations sawed it gradually deeper and deeper, till this road-ditch was formed. But it must have taken centuries to do it. Many of these hollow lanes, especially those on flat ground, must be as old or older than the Conquest. In Devonshire I am sure that they are. But there many of them, one suspects, were made not of malice, but of cowardice prepense. Your indigenous Celt was, one fears, a sneaking animal, and liked to keep when he could under cover of banks and hillsides; while your bold Roman made his raised roads straight over hill and dale, as "ridgeways" from which, as from an eagle's eyrie, he could survey the conquered lowlands far and wide. It marks strongly the difference between the two races, that difference between the Roman paved road with its established common way for all passengers, its regular stations and milestones, and the Celtic trackway winding irresolutely along in innumerable ruts, parting to meet again, as if each savage (for they were little better) had taken his own fresh path when he found the next line of ruts too heavy for his cattle. Around the spurs of Dartmoor I have seen many ancient roads, some of them long disused, which could have been hollowed out for no other purpose but that of concealment.

So I go slowly up the hill, till the valley lies beneath me like a long, green garden between its two banks of brown moor; and on through a cheerful little green, with red brick cottages scattered all around, each with its large, neat garden, and beehives, and pigs, and geese, and turf-stack, and clipped yews and hollies before the door, and rosy, dark-eyed children, and all the simple healthy comforts of a wild "heth-cropper's" home,

When he can, the good-man of the house works at farm labor, or cuts his own turf; and when work is scarce, he cuts copses and makes heathbrooms, and does a little poaching. True, he seldom goes to church, save to be christened, married, or buried; but he equally seldom gets drunk. For church and public stand together two miles off; so that social wants sometimes bring their own compensations with them, and there are two sides to every question.

Hark! A faint, dreary hollo off the moor above. And then another, and another. My friends may trust it; for the clod of these parts delights in the chase like any bare-legged Paddy, and casts away flail and fork wildly, to run, shout, assist, and interfere in all possible ways, out of pure love. The descendant of many generations of broom-squires and deer-stealers, the instinct of sport is strong within him still, though no more of the King's deer are to be shot in the winter turnip-fields, or worse, caught by an apple-baited hook hung from an orchard bough. He now limits his aspirations to hares and pheasants, and too probably once in his life "hits the keeper into the river," and reconsiders himself for a while after over a crank in Winchester gaol. Well, he has his faults; and I have mine. But he is a thorough good-fellow nevertheless; quite as good as I: civil, contented, industrious, and often very handsome; and a far shrewder fellow too — owing to his dash of wild forest blood, from gypsy, highwayman, and what not — than his bullet-headed and flaxen-polled cousin, the pure South-Saxon of the Chalk-downs. Dark-haired he is, ruddy, and tall of bone; swaggering in his youth; but when he grows old, a thorough gentleman, reserved, stately, and courteous as a prince. Sixteen years have I lived with him, hail fellow well met, and never yet had a rude word or action from him.

With him I have cast in my lot, to live and die, and be buried by his side; and to him I go home contented, to look after his petty interests, cares, sorrows — petty truly, seeing that they include the whole primal mysteries of life, — food, raiment,

and work to earn them withal; love and marriage, birth and death, right-doing and wrong-doing, "*Schicksal und eigene Schuld*"¹; and all those commonplaces of humanity which in the eyes of a minute philosopher are most divine, because they are most commonplace — catholic as the sunshine and the rain which come down from the Heavenly Father, alike upon the evil and the good. As for doing fine things, my friend, with you, I have learned to believe that I am not set to do fine things, simply because I am not able to do them; and as for seeing fine things, with you, I have learned to see the sight — as well as to try to do the duty — which lies nearest me; and to comfort myself with the fancy that if I make good use of my eyes and brain in this life, I shall see — if it be of any use to me — all the fine things, or perhaps finer still, in the life to come. But if not — what matter? In any life, in any state, however simple or humble, there will be always sufficient to occupy a minute philosopher; and if a man be busy, and busy about his duty, what more does he require, for time or for eternity?

¹ Destiny and one's own fault.

BACK TO NATURE¹

HENRY SEIDEL CANBY

No one tendency in life as we live it in America to-day is more characteristic than the impulse, as recurrent as summer, to take to the woods. Sometimes it disguises itself under the name of science; sometimes it is mingled with hunting and the desire to kill; often it is sentimentalized and leads strings of gaping "students" bird-hunting through the wood lot; and again it perilously resembles a desire to get back from civilization and go "on the loose." Say your worst of it, still the fact remains that more Americans go back to nature for one reason or another annually than any civilized men before them. And more Americans, I fancy, are studying nature in clubs or public schools — or, in summer camps and the Boy Scouts, imitating nature's creatures, the Indian and the pioneer — than even statistics could make believable.

What is the cause? In life, it is perhaps some survival of the pioneering instinct, spending itself upon fishing, or bird-hunting, or trail hiking, much as the fight instinct leads us to football, or the hunt instinct sends every dog sniffing at dawn through the streets of his town. Not everyone is thus atavistic, if this be atavism; not every American is sensitive to spruce spires, or the hermit thrush's chant, or white water in a forest gorge, or the meadow lark across the frosted fields. Naturally. The surprising fact is that in a bourgeois civilization like ours, so many are affected.

And yet what a criterion nature love or nature indifference is. It seems that if I can try a man by a silent minute in the

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piners, the view of a jay pirating through the bushes, spring odors, or December flush on evening snow, I can classify him by his reactions. Just where I do not know; for certainly I do not put him beyond the pale if his response is not as mine. And yet he will differ, I feel sure, in more significant matters. He is not altogether of my world. Nor does he enter into this essay. There are enough without him, and of every class. In the West, the very day laborer pitches his camp in the mountains for his two weeks' holiday. In the East and Middle West every pond with a fringe of hemlocks, or hill view by a trolley line, or strip of ocean beach, has its cluster of bungalows where the proletariat perform their *villeggiatura* as the Italian aristocracy did in the days of the Renaissance. Patently the impulse exists, and counts for something here in America.

It counts for something, too, in American literature. Since our writing ceased being colonial English and began to reflect a race in the making, the note or woods-longing has been so insistent that one wonders whether here is not to be found at last the characteristic "trait" that we have all been patriotically seeking.

I do not limit myself in this statement to the professed "nature writers" of whom we have bred far more than any other race with which I am familiar. In the list — which I shall not attempt — of the greatest American writers, one cannot fail to include Emerson, Hawthorne, Thoreau, Cooper, Lowell, and Whitman. And every one of these men was vitally concerned with nature, and some were obsessed by it. Lowell was a scholar and man of the world, urban therefore; but his poetry is more enriched by its homely New England background than by its European polish. Cooper's ladies and gentlemen are puppets merely, his plots melodrama; it is the woods he knew, and the creatures of the woods, Deerslayer and Chingachgook, that preserve his books. Whitman made little distinction between nature and human nature, perhaps too little. But read "Out of the Cradle Endlessly Rocking" or "The Song of the Redwood

Tree," and see how keen and how vital was his instinct for native soil. As for Hawthorne, you could make a text-book on nature study from his *Note Book*. He was an imaginative moralist first of all; but he worked out his visions in terms of New England woods and hills. So did Emerson. The day was "not wholly profane" for him when he had "given heed to some natural object." Thoreau needs no proving. He is at the head and forefront of all field and forest lovers in all languages and times.

These are the greater names. The lesser are as leaves in the forest: Audubon, Burroughs, Muir, Clarence King, Lanier — the stream broadening and shallowing through earnest forest lovers, romantic "nature fakers," literary sportsmen, amiable students, and tens of thousands of teachers inculcating this American tendency in another generation. The phenomenon asks for an explanation. It is more than a category of American literature that I am presenting; it is an American trait.

The explanation I wish to proffer in this essay may sound fantastical; most explanations that explain anything usually do — at first. I believe that this vast rush of nature into American literature is more than a mere reflection of a liking for the woods. It represents a search for a tradition, and its capture.

Good books, like well-built houses, must have tradition behind them. The Homers and Shakespeares and Goethes spring from rich soil left by dead centuries; they are like native trees that grow so well nowhere else. The little writers — hacks who sentimentalize to the last order, and display their plot novelties like bargains on an advertising page — are just as traditional. The only difference is that their tradition goes back to books instead of life. Middle-sized authors — the very good and the probably enduring — are successful largely because they have gripped a tradition and followed it through to contemporary life. This is what Thackeray did in *Vanity Fair*, Howells in *The Rise of Silas Lapham*, and Mrs. Wharton in *The House of Mirth*. But the back-to-nature books — both

the sound ones and those shameless exposures of the private emotions of ground hogs and turtles that call themselves nature books — are the most traditional of all. For they plunge directly into what might be called the adventures of the American subconsciousness.

It is the subconsciousness that carries tradition into literature. That curious reservoir where forgotten experiences lie waiting in every man's mind, as vivid as on the day of first impression, is the chief concern of psychologists nowadays. But it has never yet had due recognition from literary criticism. If the subconsciousness is well stocked, a man writes truly, his imagination is vibrant with human experience, he sets his own humble observation against a background of all he has learned and known and forgotten of civilization. If it is under-populated, if he has done little, felt little, known little of the traditional experiences of the intellect, he writes thinly. He can report what he sees, but it is hard for him to create. It was Chaucer's rich subconsciousness that turned his simple little story of Chauntecleer into a comment upon humanity. Other men had told that story — and made it scarcely more than trivial. It is the promptings of forgotten memories in the subconsciousness that give to a simple statement the force of old, unhappy things, that keep thoughts true to experience, and test fancy by life. The subconsciousness is the governor of the waking brain. Tradition — which is just man's memory of man — flows through it like an underground river from which rise the springs of everyday thinking. If there is anything remarkable about a book, look to the subconsciousness of the writer and study the racial tradition that it bears.

Now, I am far from proposing to analyze the American subconsciousness. No man can define it. But of this much I am certain. The American habit of going "back to nature" means that in our subconsciousness nature is peculiarly active. We react to nature as does no other race. We are the descendants of pioneers — all of us. And if we have not inherited a

memory of pioneering experiences, at least we possess inherited tendencies and desires. The impulse that drove Boone westward may nowadays do no more than send some young Boone canoeing on Temagami, or push him up Marcy or Shasta to inexplicable happiness on the top. But the drive is there. And furthermore, nature is still strange in America. Even now the wilderness is far from no American city. Birds, plants, trees, even animals have not, as in Europe, been absorbed into the common knowledge of the race. There are discoveries everywhere for those who can make them. Nature, indeed, is vivid in a surprising number of American brain cells, marking them with a deep and enduring impress. And our flood of nature books has served to increase her power.

It was never so with the European traditions that we brought to America with us. That is why no one reads early American books. They are pallid. They drew upon the least active portion of the American subconsciousness, and reflect memories not of experience, contact, live thought, but of books. Even Washington Irving, our first great author, is not free from this indictment. If, responding to some obscure drift of his race towards humor and the short story, he had not ripened his Augustan inheritance upon an American hillside, he, too, would by now seem juiceless, withered, like a thousand cuttings from English stock planted in forgotten pages of his period. It was not until the end of our colonial age and the rise of democracy towards Jackson's day that the rupture with our English background became sufficiently complete to make us fortify pale memories of home by a search for fresher, more vigorous tradition.

We have been searching ever since, and many eminent critics think that we have still failed to establish American literature upon American soil. The old traditions, of course, were essential. Not even the most self-sufficient American hopes to establish a brand-new culture. The problem has been to domesticate Europe, not to get rid of her. But the old stock needed a graft, just as an old fruit tree needs a graft. It

requires a new tradition. We found a tradition in New England; and then New England was given over to the alien and her traditions became local or historical merely. We found another in border life; and then the Wild West reached the Pacific and vanished. Time and again we have been flung back upon our English sources, and forced to imitate a literature sprung from a riper soil. Of course, this criticism, as it stands, is too sweeping. It neglects Mark Twain and the tradition of the American boy; it neglects Walt Whitman and the literature of free and turbulent democracy; it neglects Longfellow and Poe, and that romantic tradition of love and beauty common to all Western races. But, at least, it makes one understand why the American writer has passionately sought anything that would put an American quality into transplanted style.

He has been very successful in local color. But then local color is local. It is a minor art. In the field of human nature he has fought a doubtful battle. An occasional novel has broken through into regions where it is possible to be utterly American even while writing English. Poems too have followed. But here lie our great failures. I do not speak of the "great American novel," yet to come. I refer to the absence of a school of American fiction, or poetry, or drama, that has linked itself to any tradition broader than the romance of the colonies, New England of the forties, or the East Side of New York. The men who write for all America are mediocre. They strike no deeper than a week-old interest in current activity. They aim to hit the minute because they are shrewd enough to see that for "all America" there is very little continuity just now between one minute and the next. The America they write is contemptuous of tradition, although worshipping convention, which is the tradition of the ignorant. The men who write for a fit audience though few are too often local or archaic, narrow or European, by necessity if not by choice.

And ever since we began to incur the condescension of foreigners by trying to be American, we have been conscious of this

weak-rootedness in our literature and trying to remedy it. This is why our flood of nature books for a century is so significant. They may seem peculiar instruments for probing tradition — particularly the sentimental ones. The critic has not yet admitted some of the heartiest among them — Audubon's sketches of pioneer life, for example — into literature at all. And yet, unless I am mightily mistaken, they are signs of convalescence as clearly as they are symptoms of our disease. These United States, of course, are infinitely more important than the plot of mother earth upon which they have been erected. The intellectual background that we have inherited from Europe is more significant than the moving spirit of woods and soil and waters here. The graft, in truth, is less valuable than the tree upon which it is grafted. Yet it determines the fruit. So with the books of our nature lovers. They represent a passionate attempt to acclimatize the breed. Thoreau has been our most original writer, barring only Whitman. He and his multitudinous followers, wise and foolish, have helped establish us in our new soil.

I may seem to exaggerate the services of a group of writers who, after all, can show but one great name, Thoreau's. I do not think so, for if the heart of the nature lover is sometimes more active than his head, the earth intimacies he gives us are vital to literature in a very practical sense. Thanks to the modern science of geography, we are beginning to understand the profound and powerful influence of physical environment upon men. The geographer can tell you why Charleston was aristocratic, why New York is hurried and nervous, why Chicago is self-confident. He can guess at least why in old communities, like Hardy's Wessex or the North of France, the inhabitants of villages not ten miles apart will differ in temperament and often in temper, hill town varying from lowland village beneath it sometimes more than Kansas City from Minneapolis. He knows that the old elemental forces — wind, water, fire, and earth — still mold men's thoughts and lives a

hundred times more than they guess, even when pavements, electric lights, tight roofs, and artificial heat seem to make nature only a name. He knows that the sights and sounds and smells about us, clouds, songs, and wind murmurings, rainwashed earth, and fruit trees blossoming, enter into our subconsciousness with a power but seldom appraised. Prison life, factory service long continued, a clerk's stool, a housewife's day-long duties, — those things stunt and transform the human animal as nothing else, because of all experiences they most restrict, most impoverish the natural environment. Move a civilization and its literature from one hemisphere to another, and their adapting, adjusting services become most valuable. Men like Thoreau are worth more than we have ever guessed.

No one has ever written more honest books than Thoreau's *Walden*, his *Autumn*, *Summer*, and the rest. There is not one literary flourish in the whole of them, although they are done with consummate literary care; nothing but sound, honest observation of the world of hill-slopes, waves, flowers, birds, and beasts, and honest, shrewd philosophizing as to what it all meant for him, an American. Here is a man content to take a walk, fill his mind with observation, and then come home to think. Repeat the walk, repeat or vary the observation, change or expand the thought, and you have Thoreau. No wonder he brought his first edition home, not seriously depleted, and made his library of it! Thoreau needs excerpting to be popular. Most nature books do. But not to be valuable.

For see what this queer genius was doing. Lovingly, laboriously, and sometimes a little tediously, he was studying his environment. For some generations his ancestors had lived on a new soil, too busy in squeezing life from it to be practically aware of its differences. They and the rest had altered Massachusetts. Massachusetts had altered them. Why? To what? The answer is not yet ready. But here is one descendant who will know at least what Massachusetts is — wave, wind, soil, and the life therein and thereon. He begins humbly with the

little things; but humanly, not as the out-and-out scientist goes to work, to classify or to study the narrower laws of organic development; or romantically as the sentimentalist, who intones his "Ah!" at the sight of dying leaves or the cocoon becoming moth. It is all human, and yet all intensely practical with Thoreau. He envies the Indian not because he is "wild," or "free," or any such nonsense, but for his instinctive adaptations to his background, — because nature has become traditional, stimulative with him. And simply, almost naïvely, he sets down what he has discovered. The land I live in is like this or that; such and such life lives in it; and this is what it all means for me, the transplanted European, for us, Americans, who have souls to shape and characters to mold in a new environment, under influences subtler than we guess. "I make it my business to extract from Nature whatever nutriment she can furnish me, though at the risk of endless iteration. I milk the sky and the earth." And again: "Surely it is a defect in our Bible that it is not truly ours, but a Hebrew Bible. The most pertinent illustrations for us are to be drawn not from Egypt or Babylonia, but from New England. Natural objects and phenomena are the original symbols or types which express our thoughts and feelings. Yet American scholars, having little or no root in the soil, commonly strive with all their might to confine themselves to the imported symbols alone. All the true growth and experience, the living speech, they would fain reject as 'Americanisms.' It is the old error which the church, the state, the school, ever commit, choosing darkness rather than light, holding fast to the old and to tradition. When I really know that our river pursues a serpentine course to the Merrimack, shall I continue to describe it by referring to some other river, no older than itself, which is like it, and call it a meander? It is no more meandering than the Meander is musketaquiding."

This for Thoreau was going back to nature. Our historians of literature who cite him as an example of how to be American without being strenuous, as an instance of leisure nobly earned,

are quite wrong. If any man has striven to make us at home in America, it is Thoreau. He gave his life to it; and in some measure it is thanks to him that with most Americans you reach intimacy most quickly by talking about "the woods."

Thoreau gave to this American tendency the touch of genius and the depth of real thought. After his day the "back-to-nature" idea became more popular and perhaps more picturesque. Our literature becomes more and more aware of an American background. Bobolinks and thrushes take the place of skylarks; sumach and cedar begin to be as familiar as heather and gorse; forests, prairies, a clear, high sky, a snowy winter, a summer of thunderstorms, drive out the misty England which, since the days of Cynewulf, our ancestors had seen in the mind's eye while they were writing. Nature literature becomes a category. Men make their reputations by means of it.

No one has yet catalogued — so far as I am aware — the vast collection of back-to-nature books that followed Thoreau. No one has ever seriously criticized it, except Mr. Roosevelt, who with characteristic vigor of phrase, stamped "nature-faking" on its worser half. But everyone reads in it. Indeed, the popularity of such writing has been so great as to make us distrust its serious literary value. And yet, viewed internationally, there are few achievements in American literature so original. I will not say that John Muir and John Burroughs, upon whom Thoreau's mantle fell, have written great books. Probably not. Certainly it is too soon to say. But when you have gathered the names of Gilbert White, Fabre, Maeterlinck, and in slightly different *genres*, Izaak Walton, Hudson, and Kipling, from various literatures you will find few others abroad to list with ours. Nor do our men owe one jot or tittle of their inspiration to individuals on the other side of the water.

Locally, too, these books are more noteworthy than many at first appear. They are curiously passionate, and passion in American literature since the Civil War is rare. I do not mean

sentiment, or romance, or eroticism. I mean such passion as Wordsworth felt for his lakes, Byron (even when most Byronic) for the ocean, the author of "The Song of Roland" for his Franks. Muir loved the Yosemite as a man might love a woman. Every word he wrote of the Sierras is touched with intensity. Hear him after a day on Alaskan peaks: "Dancing down the mountain to camp, my mind glowing like the sunbeaten glaciers, I found the Indians seated around a good fire, entirely happy now that the farthest point of the journey was safely reached and the long, dark storm was cleared away. How hopefully, peacefully bright that night were the stars in the frosty sky, and how impressive was the thunder of icebergs, rolling, swelling, reverberating through the solemn stillness! I was too happy to sleep."

Such passion, and often such style, is to be found in all these books when they are good books. Compare a paragraph or two of the early Burroughs on his birch-clad lake country, or Thoreau upon Concord pines, with the "natural history paragraph" that English magazines used to publish, and you will feel it. Compare any of the lesser nature books of the mid-nineteenth century — Clarence King's "Mountaineering in the Sierra Nevada" for example — with the current novel writing of the period and you will feel the greater sincerity. A passion for nature! Except the New England passion for ideals, Whitman's passion for democracy, and Poe's lonely devotion to beauty, I sometimes think that this is the only great passion that has found its way into American literature.

Hence the "nature fakers." The passion of one generation becomes the sentiment of the next. And sentiment is easily capitalized. The individual can be stirred by nature as she is. A hermit thrush singing in moonlight above a Catskill clove will move him. But the populace will require something more sensational. To the sparkling water of truth must be added the syrup of sentiment and the cream of romance. Mr. Kipling, following ancient traditions of the Orient, gave personalities

to his animals so that stories might be made from them. Mr. Long, Mr. Roberts, Mr. London, Mr. Thompson Seton, and the rest, have told stories about animals so that the American interest in nature might be exploited. The difference is essential. If the *Jungle Books* teach anything it is the moral ideals of the British Empire. But our nature romancers — a fairer term than “fakers,” since they do not willingly “fake” — teach the background and tradition of our soil. In the process they inject sentiment, giving us the noble desperation of the stag, the startling wolf-longings of the dog, and the picturesque outlawry of the ground hog, — and get a hundred readers where Thoreau got one.

This is the same indictment as that so often brought against the stock American novel, that it prefers the gloss of easy sentiment to the rough, true fact, that it does not grapple direct with things as they are in America, but looks at them through optimist's glasses that obscure and soften the scene. Nevertheless, I very much prefer the sentimentalized animal story to the sentimentalized man story. The first, as narrative, may be romantic bosh, but it does give one a loving, faithful study of background that is worth the price that it costs in illusion. It reaches my emotions as a novelist who splashed his sentiment with equal profusion never could. My share of the race mind is willing even to be tricked into sympathy with its environment. I would rather believe that the sparrow on my telephone wire is swearing at the robin on my lawn than never to notice either of them!

How curiously complete and effective is the service of these nature books, when all is considered. There is no better instance, I imagine, of how literature and life act and react upon one another. The plain American takes to the woods because he wants to, he does not know why. The writing American puts the woods into his books, also because he wants to, although I suspect that sometimes he knows very well why. Nevertheless, the same general tendency, the same impulse, lies behind

both. But reading nature books makes us crave more nature, and every gratification of curiosity marks itself upon the subconsciousness. Thus the clear, vigorous tradition of the soil passes through us to our books, and from our books to us. It is the soundest, the sweetest, if not the greatest and deepest inspiration of American literature. In the confusion that attends the meeting here of all the races it is something to cling to; it is our own.

THE GROWTH OF SCIENCE IN THE NINETEENTH CENTURY¹

SIR MICHAEL FOSTER

THE eyes of the young look ever forward; they take little heed of the short though ever-lengthening fragment of life which lies behind them; they are wholly bent on that which is to come. The eyes of the aged turn wistfully again and again to the past; as the old glide down the inevitable slope, their present becomes a living over again the life which has gone before, and the future takes on the shape of a brief lengthening of the past. May I this evening venture to give rein to the impulses of advancing years? May I, at this last meeting of the association in the eighteen hundreds, dare to dwell for a while upon the past, and to call to mind a few of the changes which have taken place in the world since those autumn days in which men were saying to each other that the last of the seventeen hundreds was drawing toward its end?

Dover in the year of our Lord 1799 was in many ways unlike the Dover of to-day. On moonless nights men groped their way in its narrow streets by the help of swinging lanterns and smoky torches, for no lamps lit the ways. By day the light of the sun struggled into the houses through narrow panes of blurred glass. Though the town then, as now, was one of the chief portals to and from the countries beyond the seas, the means of travel was scanty and dear, available for the most part to the rich alone, and for all beset with discomfort and risk.

¹ The President's address at the Dover meeting of the British Association for the Advancement of Science, 1899. Reprinted, with some abridgement, from the Report of the Association.

Slow and uncertain was the carriage of goods, and the news of the world outside came to the town (though it, from its position, learnt more than most towns) tardily, fitfully, and often falsely. The people of Dover sat then much in dimness, if not in darkness, and lived in large measure on themselves. They who study the phenomena of living beings tell us that light is the great stimulus of life, and that the fulness of the life of a being or of any of its members may be measured by the variety, the swiftness, and the certainty of the means by which it is in touch with its surroundings. Judged from this standpoint, life at Dover then, as indeed elsewhere, must have fallen far short of the life of to-day.

The same study of living beings, however, teaches us that while from one point of view the environment seems to mold the organism, from another point the organism seems to be master of its environment. Going behind the change of circumstances, we may raise the question, the old question, Was life in its essence worth more then than now? Has there been a real advance?

Let me at once relieve your minds by saying that I propose to leave this question in the main unanswered. It may be, or it may not be, that man's grasp of the beautiful and of the good, if not looser, is not firmer than it was a hundred years ago. It may be, or it may not be, that man is no nearer to absolute truth, to seeing things as they really are, than he was then. I will merely ask you to consider with me for a few minutes how far and in what ways man's laying hold of that aspect of or part of truth which we call natural knowledge, or sometimes science, differed in 1799 from what it is to-day, and whether that change must not be accounted a real advance, a real improvement in man.

I do not propose to weary you by what in my hands would be the rash effort of attempting a survey of all the scientific results of the nineteenth century. It will be enough if for a little while I dwell on some few of the salient features distinguishing the

way in which we nowadays look upon, and during the coming week shall speak of, the works of nature around us — though those works themselves, save for the slight shifting involved in a secular change, remain exactly the same — from the way in which they were looked upon and might have been spoken of at a gathering of philosophers at Dover in 1799, and I ask your leave to do so.

In the philosophy of the ancients earth, fire, air, and water were called “the elements.” It was thought, and rightly thought, that a knowledge of them and of their attributes was a necessary basis of a knowledge of the ways of nature. Translated into modern language, a knowledge of these “elements” of old means a knowledge of the composition of the atmosphere, of water, and of all the other things which we call matter, as well as a knowledge of the general properties of gases, liquids, and solids, and of the nature and effects of combustion. Of all these things our knowledge to-day is large and exact, and, though ever enlarging, in some respects complete. When did that knowledge begin to become exact?

To-day the children in our schools know that the air which wraps round the globe is not a single thing, but is made up of two things, oxygen and nitrogen,¹ mingled together. They know, again, that water is not a single thing, but the product of two things, oxygen and hydrogen joined together. They know that when the air makes the fire burn and gives the animal life, it is the oxygen in it which does the work. They know that all round them things are undergoing that union with oxygen which we call oxidation, and that oxidation is the ordinary source of heat and light. Let me ask you to picture to yourselves what confusion there would be to-morrow, not only in the discussions at the sectional meetings of our association, but in the world at large, if it should happen that in the coming night some destroying touch should wither up certain tender structures in all our brains and wipe out from our memories all traces of the

¹ Some may already know that there is at least a third thing, argon.

ideas which cluster in our minds around the verbal tokens, oxygen and oxidation. How could any of us, not the so-called man of science alone, but even the man of business and the man of pleasure, go about his ways lacking those ideas? Yet those ideas were in 1799 lacking to all but a few.

Although in the third quarter of the seventeenth century the light of truth about oxidation and combustion had flashed out in the writings of John Mayow, it came as a flash only, and died away as soon as it had come. For the rest of that century, and for the greater part of the next, philosophers stumbled about in darkness, misled for the most of the time by the phantom conception which they called phlogiston. It was not until the end of the third quarter of the eighteenth century that the new light, which has burned steadily ever since, lit up the minds of the men of science. The light came at nearly the same time from England and from France. Rounding off the sharp corners of controversy, and joining, as we may fitly do to-day, the two countries as twin bearers of a common crown, we may say that we owe the truth to Priestley, to Lavoisier, and to Cavendish. If it was Priestley who was the first to demonstrate the existence of what we now call oxygen, it is to Lavoisier we owe the true conception of the nature of oxidation and the clear exposition of the full meaning of Priestley's discovery, while the knowledge of the composition of water, the necessary complement of the knowledge of oxygen, came to us through Cavendish and, we may perhaps add, through Watt.

The date of Priestley's discovery of oxygen is 1774, Lavoisier's classic memoir "On the nature of the principle which enters into combination with metals during calcination" appeared in 1775, and Cavendish's paper on the composition of water did not see the light until 1784.

During the last quarter of the eighteenth century this new idea of oxygen and oxidation was struggling into existence. How new was the idea is illustrated by the fact that Lavoisier himself at first spoke of that which he was afterwards, namely, in

1778, led to call oxygen, the name by which it has since been known, as "the principle which enters into combination." What difficulties its acceptance met with is illustrated by the fact that Priestley himself refused to the end of his life to grasp the true bearings of the discovery which he had made. In the year 1799 the knowledge of oxygen, of the nature of water and of air, and indeed the true conception of chemical composition and chemical change, was hardly more than beginning to be, and the century had to pass wholly away before the next great chemical idea, which we know by the name of the atomic theory of John Dalton, was made known. We have only to read the scientific literature of the time to recognize that a truth which is now not only woven as a master thread into all our scientific conceptions, but even enters largely into the everyday talk and thoughts of educated people, was a hundred years ago struggling into existence among the philosophers themselves. It was all but absolutely unknown to the large world outside those select few.

If there be one word of science which is writ large on the life of the present time, it is the word "electricity." It is, I take it, writ larger than any other word. The knowledge which it denotes has carried its practical results far and wide into our daily life, while the theoretical conceptions which it signifies pierce deep into the nature of things. We are to-day proud, and justly proud, both of the material triumphs and of the intellectual gains which it has brought us, and we are full of even larger hopes of it in the future.

At what time did this bright child of the nineteenth century have its birth?

He who listened to the small group of philosophers of Dover, who in 1799 might have discoursed of natural knowledge, would perhaps have heard much of electric machines, of electric sparks, of the electric fluid, and even of positive and negative electricity; for frictional electricity had long been known and even carefully studied. Probably one or more of the group, dwelling

on the observations which Galvani, an Italian, had made known some twenty years before, developed views on the connection of electricity with the phenomena of living bodies. Possibly one of them was exciting the rest by telling how he had just heard that a professor at Pavia, one Volta, had discovered that electricity could be produced not only by rubbing together particular bodies, but by the simple contact of two metals, and had thereby explained Galvani's remarkable results. For, indeed, as we shall hear from Professor Fleming, it was in that very year, 1799, that electricity as we now know it took its birth. It was then that Volta brought to light the apparently simple truths out of which so much has sprung. The world, it is true, had to wait for yet some twenty years before both the practical and theoretic worth of Volta's discovery became truly pregnant under the fertilizing influence of another discovery. The loadstone and magnetic virtues had, like the electrifying power of rubbed amber, long been an old story. But, save for the compass, not much had come from it. And even Volta's discovery might have long remained relatively barren had it been left to itself. When, however, in 1819, Oersted made known his remarkable observations on the relations of electricity to magnetism, he made the contact needed for the flow of a new current of ideas. And it is perhaps not too much to say that those ideas, developing during the years of the rest of the century with an ever-accelerating swiftness, have wholly changed man's material relations to the circumstances of life, and at the same time carried him far in his knowledge of the nature of things.

Of all the various branches of science, none perhaps is to-day, none for these many years past has been, so well known to, even if not understood by, most people as that of geology. Its practical lessons have brought wealth to many; its fairy tales have brought delight to more; and round it hovers the charm of danger, for the conclusions to which it leads touch on the nature of man's beginning.

In 1799 the science of geology, as we now know it, was struggling into birth. There had been from of old cosmogonies, theories as to how the world had taken shape out of primeval chaos. In that fresh spirit which marked the zealous search after natural knowledge pursued in the middle and latter part of the seventeenth century, the brilliant Stenson, in Italy, and Hooke, in our own country, had laid hold of some of the problems presented by fossil remains, and Woodward, with others, had labored in the same field. In the eighteenth century, especially in its latter half, men's minds were busy about the physical agencies determining or modifying the features of the earth's crust; water and fire, subsidence from a primeval ocean and transformation by outbursts of the central heat, Neptune and Pluto, were being appealed to, by Werner on the one hand and by Demarest on the other, in explanation of the earth's phenomena. The way was being prepared, theories and views were abundant, and many sound observations had been made; and yet the science of geology, properly so called, the exact and proved knowledge of the successive phases of the world's life, may be said to date from the closing years of the eighteenth century.

In 1783 James Hutton put forward in a brief memoir his Theory of the Earth, which, in 1795, two years before his death, he expanded into a book; but his ideas failed to lay hold of men's minds until the century had passed away, when, in 1802, they found an able expositor in John Playfair. The very same year that Hutton published his theory, Cuvier came to Paris and almost forthwith began, with Brongniart, his immortal researches into the fossils of Paris and its neighborhood. And four years later, in the year 1799 itself, William Smith's tabular list of strata and fossils saw the light. It is, I believe, not too much to say that out of these, geology, as we now know it, sprang. It was thus in the closing years of the eighteenth century that was begun the work which the nineteenth century has carried forward to such great results, but at this time only the select few had grasped the truth, and even they only the

beginning of it. Outside a narrow circle the thoughts even of the educated about the history of the globe were bounded by the story of the deluge — though the story was often told in a strange fashion — or were guided by fantastic views of the plastic forces of a sportive nature.

In another branch of science, in that which deals with the problems presented by living beings, the thoughts of men in 1799 were also very different from the thoughts of men to-day. It is a very old quest, the quest after the knowledge of the nature of living beings, one of the earliest on which man set out; for it promised to lead him to a knowledge of himself, a promise which perhaps is still before us, but the fulfillment of which is yet far off. As time has gone on, the pursuit of natural knowledge has seemed to lead man away from himself into the furthestmost parts of the universe, and into secret workings of Nature in which he appears to be of little or no account; and his knowledge of the nature of living things, and so of his own nature, has advanced slowly, waiting till the progress of other branches of natural knowledge can bring it aid. Yet in the past hundred years the biologic sciences, as we now call them, have marched rapidly onward.

We may look upon a living body as a machine doing work in accordance with certain laws, and may seek to trace out the working of the inner wheels, how these raise up the lifeless dust into living matter, and let the living matter fall away again into dust, giving out movement and heat. Or we may look upon the individual life as a link in a long chain, joining something which went before to something about to come, a chain whose beginning lies hid in the farthest past, and may seek to know the ties which bind one life to another. As we call up to view the long series of living forms, living now or flitting like shadows on the screen of the past, we may strive to lay hold of the influences which fashion the garment of life. Whether the problems of life are looked upon from the one point of view or the other, we to-day, not biologists only but all of us, have

gained a knowledge hidden even from the philosophers a hundred years ago.

Of the problems presented by the living body viewed as a machine, some may be spoken of as mechanical, others as physical, and yet others as chemical, while some are, apparently at least, none of these. In the seventeenth century William Harvey, laying hold of the central mechanism of the blood stream, opened up a path of inquiry which his own age and the century which followed trod with marked success. The knowledge of the mechanics of the animal and of the plant advanced apace, but the physical and chemical problems had yet to wait. The eighteenth century, it is true, had its physics and its chemistry; but, in relation at least to the problems of the living being, a chemistry which knew not oxygen and a physics which knew not the electricity of chemical action were of little avail. The philosopher of 1799, when he discussed the functions of the animal or of the plant involving chemical changes, was fain for the most part, as were his predecessors in the century before, to have recourse to such vague terms as "fermentation" and the like; to-day our treatises on physiology are largely made up of precise and exact expositions of the play of physical agencies and chemical bodies in the living organisms. He made use of the words "vital force" or "vital principle" not as an occasional, but as a common explanation of the phenomena of the living body. During the present century, especially during its latter half, the idea embodied in those words has been driven away from one seat after another; if we use it now when we are dealing with the chemical and physical events of life, we use it with reluctance, as a *deus ex machina* to be appealed to only when everything else has failed.

Some of the problems — and those, perhaps, the chief problems — of the living body have to be solved neither by physical nor by chemical methods, but by methods of their own. Such are the problems of the nervous system. In respect to these the men of 1799 were on the threshold of a pregnant discovery. During

the latter part of the present century, and especially during its last quarter, the analysis of the mysterious processes in the nervous system, and especially in the brain, which issue as feeling, thought, and the power to move, has been pushed forward with a success conspicuous in its practical, and full of promise in its theoretical, gains. That analysis may be briefly described as a following up of threads. We now know that what takes place along a tiny thread which we call a nerve fiber differs from that which takes place along its-fellow-threads, that differing nervous impulses travel along different nervous fibers, and that nervous and psychical events are the outcome of the clashing of nervous impulses as they sweep along the closely woven web of living threads of which the brain is made. We have learned by experiment and by observation that the pattern of the web determines the play of the impulses, and we can already explain many of the obscure problems not only of nervous disease, but of nervous life, by an analysis which is a tracking out the devious and linked path of nervous threads. The very beginning of this analysis was unknown in 1799. Men knew that nerves were the agents of feeling and of the movements of muscles; they had learned much about what this part or that part of the brain could do; but they did not know that one nerve fiber differed from another in the very essence of its work. It was just about the end of the past century, or the beginning of the present one, that an English surgeon began to ponder over a conception which, however, he did not make known until some years later, and which did not gain complete demonstration and full acceptance until still more years had passed away. It was in 1811, in a tiny pamphlet published privately, that Charles Bell put forth his New Idea that the nervous system was constructed on the principle that "the nerves are not single nerves possessing various powers, but bundles of different nerves whose filaments are united for the convenience of distribution, but which are distinct in office as they are in origin from the brain."

Our present knowledge of the nervous system is to a large extent only an exemplification and expansion of Charles Bell's New Idea, and has its origin in that.

If we pass from the problems of the living organism viewed as a machine to those presented by the varied features of the different creatures who have lived or who still live on the earth, we at once call to mind that the middle years of the present century mark an epoch in biologic thought such as never came before, for it was then that Charles Darwin gave to the world the *Origin of Species*.

That work, however, with all the far-reaching effects which it has had, could have had little or no effect, or, rather, could not have come into existence, had not the earlier half of the century been in travail preparing for its coming. For the germinal idea of Darwin appeals, as to witnesses, to the results of two lines of biologic investigation which were almost unknown to the men of the eighteenth century.

To one of these lines I have already referred. Darwin, as we know, appealed to the geological record; and we also know how that record, imperfect as it was then, and imperfect as it must always remain, has since his time yielded the most striking proofs of at least one part of his general conception. In 1799 there was, as we have seen, no geological record at all.

Of the other line I must say a few words.

To-day the merest beginner in biologic study, or even that exemplar of acquaintance without knowledge, the general reader, is aware that every living being, even man himself, begins its independent existence as a tiny ball, of which we can, even acknowledging to the full the limits of the optical analysis at our command, assert with confidence that in structure, using that word in its ordinary sense, it is in all cases absolutely simple. It is equally well known that the features of form which supply the characters of a grown-up living being, all the many and varied features of even the most complex organism, are reached as the goal of a road, at times a long road, of successive

changes; that the life of every being, from the ovum to its full estate, is a series of shifting scenes, which come and go, sometimes changing abruptly, sometimes melting the one into the other, like dissolving views, all so ordained that often the final shape with which the creature seems to begin, or is said to begin, its life in the world is the outcome of many shapes, clothed with which it in turn has lived many lives before its seeming birth.

All or nearly all the exact knowledge of the labored way in which each living creature puts on its proper shape and structure is the heritage of the present century. Although the way in which the chick is molded in the egg was not wholly unknown even to the ancients, and in later years had been told, first in the sixteenth century by Fabricius, then in the seventeenth century in a more clear and striking manner by the great Italian naturalist, Malpighi, the teaching thus offered had been neglected or misinterpreted. At the close of the eighteenth century the dominant view was that in the making of a creature out of the egg there was no putting on of wholly new parts, no epigenesis. It was taught that the entire creature lay hidden in the egg, hidden by reason of the very transparency of its substance, lay ready-made, but folded up, as it were, and that the process of development within the egg or within the womb was a mere unfolding, a simple evolution. Nor did men shrink from accepting the logical outcome of such a view — namely, that within the unborn creature itself lay in like manner, hidden and folded up, its offspring also, and within that again its offspring in turn, after the fashion of a cluster of ivory balls carved by Chinese hands, one within the other. This was no fantastic view put forward by an imaginative dreamer; it was seriously held by sober men, even by men like the illustrious Haller, in spite of their recognizing that as the chick grew in the egg some changes of form took place. Though so early as the middle of the eighteenth century Friedrich Casper Wolff and, later on, others had strenuously opposed such a view, it held its own not only to the close of the century, but far on into the next. It was not

until a quarter of the present century had been added to the past that Von Baer made known the results of researches which once and for all swept away the old view. He and others working after him made it clear that each individual puts on its final form and structure not by an unfolding of preëxisting hidden features, but by the formation of new parts through the continued differentiation of a primitively simple material. It was also made clear that the successive changes which the embryo undergoes in its progress from the ovum to maturity are the expression of morphologic laws, that the progress is one from the general to the special, and that the shifting scenes of embryonic life are hints and tokens of lives lived by ancestors in times long past.

If we wish to measure how far off in biologic thought the end of the last century stands, not only from the end, but even from the middle of this one, we may imagine Darwin striving to write the *Origin of Species* in 1799. We may fancy his being told by philosophers explaining how one group of living beings differed from another group because all its members and all their ancestors came into existence at one stroke when the first-born progenitor of the race, within which all the rest were folded up, stood forth as the result of a creative act. We may fancy him listening to a debate between the philosopher who maintained that all the fossils strewn in the earth were the remains of animals or plants churned up in the turmoil of a violent universal flood, and dropped in their places as the waters went away, and him who argued that such were not really the "spoils of living creatures," but the products of some playful plastic power which out of the super-abundance of its energy fashioned here and there the lifeless earth into forms which imitated, but only imitated, those of living things. Could he amid such surroundings, by any flight of genius, have beat his way to the conception for which his name will ever be known?

Here I may well turn away from the past. It is not my purpose, nor, as I have said, am I fitted, nor is this perhaps the place,

to tell even in outline the tale of the work of science in the nineteenth century. I am content to have pointed out that the two great sciences of chemistry and geology took their birth, or at least began to stand alone, at the close of the last century, and have grown to be what we know them now within about a hundred years, and that the study of living beings has within the same time been so transformed as to be to-day something wholly different from what it was in 1799. And, indeed, to say more would be to repeat almost the same story about other things. If our present knowledge of electricity is essentially the child of the nineteenth century, so also is our present knowledge of many other branches of physics. And those most ancient forms of exact knowledge, the knowledge of numbers and of the heavens, whose beginning is lost in the remote past, have, with all other kinds of natural knowledge, moved onward during the whole of the hundred years with a speed which is ever increasing. I have said, I trust, enough to justify the statement that in respect to natural knowledge a great gulf lies between 1799 and 1899. That gulf, moreover, is a twofold one: not only has natural knowledge been increased, but men have run to and fro spreading it as they go. Not only have the few driven far back round the full circle of natural knowledge the dark clouds of the unknown which wrap us all about, but also the many walk in the zone of light thus increasingly gained. If it be true that the few to-day are, in respect to natural knowledge, far removed from the few of those days, it is also true that nearly all which the few alone knew then, and much which they did not know, has now become the common knowledge of the many.

What, however, I may venture to insist upon here is that the difference in respect to natural knowledge, whatever be the case with other differences between then and now, is undoubtedly a difference which means progress. The span between the science of that time and the science of to-day is beyond all question a great stride onward.

We may say this, but we must say it without boasting. For the very story of the past which tells of the triumphs of science bids the man of science put away from him all thoughts of vainglory, and that by many tokens.

Whoever, working at any scientific problem, has occasion to study the inquiries into the same problem by some fellow-worker in the years long gone by, comes away from that study humbled by one or other of two different thoughts. On the one hand, he may find, when he has translated the language of the past into the phraseology of to-day, how near was his forerunner of old to the conception which he thought, with pride, was all his own, not only so true but so new. On the other hand, if the ideas of the investigator of old, viewed in the light of modern knowledge, are found to be so wide of the mark as to seem absurd, the smile which begins to play upon the lips of the modern is checked by the thought, Will the ideas which I am now putting forth, and which I think explain so clearly, so fully, the problem in hand, seem to some worker in the far future as wrong and as fantastic as do these of my forerunner to me? In either case his personal pride is checked. Further, there is written clearly on each page of the history of science, in characters which cannot be overlooked, the lesson that no scientific truth is born anew, coming by itself and of itself. Each new truth is always the offspring of something which has gone before, becoming in turn the parent of something coming after. In this aspect the man of science is unlike, or seems to be unlike, the poet and the artist. The poet is born, not made; he rises up, no man knowing his beginnings; when he goes away, though men after him may sing his songs for centuries, he himself goes away wholly, having taken with him his mantle, for this he can give to none other. The man of science is not thus creative; he is created. His work, however great it be, is not wholly his own; it is in part the outcome of the work of men who have gone before. Again and again a conception which has made a name great has come not so much by the man's own effort as

out of the fullness of time. Again and again we may read in the words of some man of old the outlines of an idea which in later days has shone forth as a great acknowledged truth. From the mouth of the man of old the idea dropped barren, fruitless; the world was not ready for it, and heeded it not; the concomitant and abutting truths which could give it power to work were wanting. Coming back again in later days, the same idea found the world awaiting it; things were in travail preparing for it, and some one, seizing the right moment to put it forth again, leaped into fame. It is not so much the men of science who make science as some spirit which, born of the truths already won, drives the man of science onward and uses him to win new truths in turn.

It is because each man of science is not his own master, but one of many obedient servants of an impulse which was at work long before him, and will work long after him, that in science there is no falling back. In respect to other things there may be times of darkness and times of light; there may be risings, decadences, and revivals. In science there is only progress. The path may not be always a straight line; there may be swerving to this side and to that; ideas may seem to return again and again to the same point of the intellectual compass; but it will always be found that they have reached a higher level — they have moved, not in a circle, but in a spiral. Moreover, science is not fashioned as is a house, by putting brick to brick, that which is once put remaining as it was put to the end. The growth of science is that of a living being. As in the embryo, phase follows phase, and each member or body puts on in succession different appearances, though all the while the same member, so a scientific conception of one age seems to differ from that of a following age, though it is the same one in the process of being made; and as the dim outlines of the early embryo become, as the being grows more distinct and sharp, like a picture on a screen brought more and more into focus, so the dim gropings and searchings of the men of science of old

are by repeated approximations wrought into the clear and exact conclusions of later times.

The story of natural knowledge, of science, in the nineteenth century, as, indeed, in preceding centuries, is, I repeat, a story of continued progress. There is in it not so much as a hint of falling back, not even of standing still. What is gained by scientific inquiry is gained forever; it may be added to, it may seem to be covered up, but it can never be taken away. Confident that the progress will go on, we cannot help peering into the years to come and straining our eyes to foresee what science will become and what it will do as they roll on. While we do so, the thought must come to us, Will all the increasing knowledge of nature avail only to change the ways of man; will it have no effect on man himself?

The material good which mankind has gained and is gaining through the advance of science is so imposing as to be obvious to everyone, and the praises of this aspect of science are to be found in the mouths of all. Beyond all doubt science has greatly lessened and has markedly narrowed hardship and suffering; beyond all doubt science has largely increased and has widely diffused ease and comfort. The appliances of science have, as it were, covered with a soft cushion the rough places of life, and that not for the rich only, but also for the poor. So abundant and so prominent are the material benefits of science that in the eyes of many these seem to be the only benefits which she brings. She is often spoken of as if she were useful and nothing more, as if her work were only to administer to the material wants of man.

Is this so?

We may begin to doubt it when we reflect that the triumphs of science which bring these material advantages are in their very nature intellectual triumphs. The increasing benefits brought by science are the results of man's increasing mastery over nature, and that mastery is increasingly a mastery of mind; it is an increasing power to use the forces of what we call inanimate

nature in place of the force of his own or other creatures' bodies; it is an increasing use of mind in place of muscle.

Is it to be thought that that which has brought the mind so greatly into play has had no effect on the mind itself? Is that part of the mind which works out scientific truths a mere slavish machine, producing results it knows not how, having no part in the good which in its workings it brings forth?

What are the qualities, the features, of that scientific mind which has wrought, and is working, such great changes in man's relation to nature? In seeking an answer to this question we have not to inquire into the attributes of genius. Though much of the progress of science seems to take on the form of a series of great steps, each made by some great man, the distinction in science between the great discoverer and the humble worker is one of degree only, not of kind. As I was urging just now, the greatness of many great names in science is often, in large part, the greatness of occasion, not of absolute power. The qualities which guide one man to a small truth silently taking its place among its fellows, as these go to make up progress, are at bottom the same as those by which another man is led to something of which the whole world rings.

The features of the fruitful scientific mind are in the main three.

In the first place, above all other things, his nature must be one which vibrates in unison with that of which he is in search; the seeker after truth must himself be truthful, truthful with the truthfulness of nature. For the truthfulness of nature is not wholly the same as that which man sometimes calls truthfulness. It is far more imperious, far more exacting. Man, unscientific man, is often content with "the nearly" and "the almost." Nature never is. It is not her way to call the same two things which differ, though the difference may be measured by less than a thousandth of a milligram or of a millimeter, or by any other like standard of minuteness. And the man who, carrying the ways of the world into the domain of science, thinks

that he may treat nature's differences in any other way than she treats them herself, will find that she resents his conduct; if he, in carelessness or in disdain, overlooks the minute difference which she holds out to him as a signet to guide him in his search, the projecting tip, as it were, of some buried treasure, he is bound to go astray, and the more strenuously he struggles on the farther he will find himself from his true goal.

In the second place, he must be alert of mind. Nature is ever making signs to us; she is ever whispering to us the beginnings of her secrets; the scientific man must be ever on the watch, ready at once to lay hold of nature's hint, however small; to listen to her whisper, however low.

In the third place, scientific inquiry, though it be preëminently an intellectual effort, has need of the moral quality of courage — not so much the courage which helps a man to face a sudden difficulty as the courage of steadfast endurance. Almost every inquiry, certainly every prolonged inquiry, sooner or later goes wrong. The path, at first so straight and clear, grows crooked and gets blocked; the hope and enthusiasm, or even the jaunty ease, with which the inquirer set out, leave him, and he falls into a slough of despond. That is the critical moment calling for courage. Struggling through the slough, he will find on the other side the wicket gate opening up the real path; losing heart, he will turn back and add one more stone to the great cairn of the unaccomplished.

But, I hear some one say, these qualities are not the peculiar attributes of the man of science; they may be recognized as belonging to almost everyone who has commanded or deserved success, whatever may have been his walk of life. That is so. That is exactly what I would desire to insist, that the men of science have no peculiar virtues, no special powers. They are ordinary men, their characters are common, even commonplace. Science, as Huxley said, is organized common sense, and men of science are common men drilled in the ways of common sense. For their life has this feature. Though in themselves

they are no stronger, no better than other men, they possess a strength which, as I just now urged, is not their own, but is that of the science whose servants they are. Even in his apprenticeship the scientific inquirer, while learning what has been done before his time, if he learns it aright, so learns it that what is known may serve him not only as a vantage ground whence to push off into the unknown, but also as a compass to guide him in his course. And when fitted for his work he enters on inquiry itself, what a zealous, anxious guide, what a strict and, because strict, helpful schoolmistress does Nature make herself to him! Under her care every inquiry, whether it bring the inquirer to a happy issue or seem to end in naught, trains him for the next effort. She so orders her ways that each act of obedience to her makes the next act easier for him, and step by step she leads him on toward that perfect obedience which is complete mastery.

Indeed, when we reflect on the potency of the discipline of scientific inquiry we cease to wonder at the progress of scientific knowledge. The results actually gained seem to fall so far short of what under such guidance might have been expected to have been gathered in that we are fain to conclude that science has called to follow her, for the most part, the poor in intellect and the wayward in spirit. Had she called to her service the many acute minds who have wasted their strength struggling in vain to solve hopeless problems, or who have turned their energies to things other than the increase of knowledge; had she called to her service the many just men who have walked straight without the need of a rod to guide them, how much greater than it has been would have been the progress of science, and how many false teachings would the world have been spared! To men of science themselves, when they consider their favored lot, the achievements of the past should serve not as a boast, but as a reproach.

If there be any truth in what I have been urging, that the pursuit of scientific inquiry is itself a training of special potency,

giving strength to the feeble and keeping in the path those who are inclined to stray, it is obvious that the material gains of science, great as they may be, do not make up all the good which science brings or may bring to man. We especially, perhaps, in these later days, through the rapid development of the physical sciences, are too apt to dwell on the material gains alone. As a child in its infancy looks upon its mother only as a giver of good things, and does not learn till in after days how she was also showing her love by carefully training it in the way it should go, so we, too, have thought too much of the gifts of science, overlooking her power to guide.

Man does not live by bread alone, and science brings him more than bread. It is a great thing to make two blades of grass grow where before one alone grew; but it is no less great a thing to help a man to come to a just conclusion on the questions with which he has to deal. We may claim for science that while she is doing the one she may be so used as to do the other also. The dictum just quoted, that science is organized common sense, may be read as meaning that the common problems of life which common people have to solve are to be solved by the same methods by which the man of science solves his special problems. It follows that the training which does so much for him may be looked to as promising to do much for them. Such aid can come from science on two conditions only. In the first place, this her influence must be acknowledged; she must be duly recognized as a teacher no less than as a hewer of wood and a drawer of water. And the pursuit of science must be followed, not by the professional few only, but at least in such measure as will insure the influence of example by the many. But this latter point I need not urge before this great association, whose chief object during more than half a century has been to bring within the fold of science all who would answer to the call. In the second place, it must be understood that the training to be looked for from science is the outcome, not of the accumulation of scientific knowledge, but of the prac-

tice of scientific inquiry. Man may have at his fingers' ends all the accomplished results and all the current opinions of any one or of all the branches of science, and yet remain wholly unscientific in mind; but no one can have carried out even the humblest research without the spirit of science in some measure resting upon him. And that spirit may in part be caught even without entering upon an actual investigation in search of a new truth. The learner may be led to old truths, even the oldest, in more ways than one. He may be brought abruptly to a truth in its finished form, coming straight to it like a thief climbing over the wall; and the hurry and press of modern life tempt many to adopt this quicker way. Or he may be more slowly guided along the path by which the truth was reached by him who first laid hold of it. It is by this latter way of learning the truth, and by this alone, that the learner may hope to catch something at least of the spirit of the scientific inquirer.

This is not the place, nor have I the wish, to plunge into the turmoil of controversy; but if there be any truth in what I have been urging, then they are wrong who think that in the schooling of the young science can be used with profit only to train those for whom science will be the means of earning their bread. It may be that from the point of view of pedagogic art the experience of generations has fashioned out of the older studies of literature an instrument of discipline of unusual power, and that the teaching of science is as yet but a rough tool in unpracticed hands. That, however, is not an adequate reason why scope should not be given for science to show the value which we claim for it as an intellectual training fitted for all sorts and conditions of men. Nor need the studies of humanity and literature fear her presence in the schools, for if her friends maintain that the teaching is one-sided, and therefore misleading, which deals with the doings of man only, and is silent about the works of nature, in the sight of which he and his doings shrink almost to nothing, she herself would be the first to admit

that that teaching is equally wrong which deals only with the works of nature and says nothing about the doings of man, who is, to us at least, nature's center.

There is yet another general aspect of science on which I would crave leave to say a word. In that broad field of human life which we call politics, in the struggle not of man with man, but of race with race, science works for good. If we look only on the surface it may at first sight seem otherwise. In no branch of science has there during these later years been greater activity and more rapid progress than in that which furnishes the means by which man brings death, suffering, and disaster on his fellowmen. If the healer can look with pride on the increased power which science has given him to alleviate human suffering and ward off the miseries of disease, the destroyer can look with still greater pride on the power which science has given him to sweep away lives and to work desolation and ruin; while the one has slowly been learning to save units, the other has quickly learned to slay thousands. But, happily, the very greatness of the modern power of destruction is already becoming a bar to its use, and bids fair — may we hope before long — wholly to put an end to it; in the words of Tacitus, though in another sense, the very preparations for war, through the character which science gives them, make for peace.

Moreover, not in one branch of science only, but in all, there is a deep undercurrent of influence sapping the very foundations of all war. As I have already urged, no feature of scientific inquiry is more marked than the dependence of each step forward on other steps which have been made before. The man of science cannot sit by himself in his own cave weaving out results by his own efforts, unaided by others, heedless of what others have done and are doing. He is but a bit of a great system, a joint in a great machine, and he can only work aright when he is in due touch with his fellow workers. If his labor is to be what it ought to be, and is to have the weight which it ought to have, he must know what is being done, not by him-

self, but by others, and by others not of his own land and speaking his tongue only, but also of other lands and of other speech. Hence it comes about that to the man of science the barriers of manners and of speech which pen men into nations become more and more unreal and indistinct. He recognizes his fellow-worker, wherever he may live, and whatever tongue he may speak, as one who is pushing forward shoulder to shoulder with him toward a common goal, as one whom he is helping and who is helping him. The touch of science makes the whole world kin.

The history of the past gives us many examples of this brotherhood of science. In the revival of learning throughout the sixteenth and seventeenth centuries, and some way on into the eighteenth century, the common use of the Latin tongue made intercourse easy. In some respects in those earlier days science was more cosmopolitan than it afterwards became. In spite of the difficulties and hardships of travel, the men of science of different lands again and again met each other face to face, heard with their ears, and saw with their eyes what their brethren had to say or show. The Englishman took the long journey to Italy to study there; the Italian, the Frenchman, and the German wandered from one seat of learning to another; and many a man held a chair in a country not his own. There was help, too, as well as intercourse. The Royal Society of London took upon itself the task of publishing nearly all the works of the great Italian, Malpighi, and the brilliant Lavoisier, two years before his own countrymen in their blind fury slew him, received from the same body the highest token which it could give of its esteem.

In these closing years of the nineteenth century this great need of mutual knowledge and of common action felt by men of science of different lands is being manifested in a special way. Though nowadays what is done anywhere is soon known everywhere, the news of a discovery being often flashed over the globe by telegraph, there is an increasing activity in the direction

of organization to promote international meetings and international coöperation. In almost every science inquirers from many lands now gather together at stated intervals in international congresses to discuss matters which they have in common at heart, and go away each one feeling strengthened by having met his brother. The desire that in the struggle to lay bare the secrets of nature the least waste of human energy should be incurred is leading more and more to the concerted action of nations combining to attack problems the solution of which is difficult and costly. The determination of standards of measurement, magnetic surveys, the solution of great geodetic problems, the mapping of the heavens and of the earth — all these are being carried on by international organizations.

In this and in other countries men's minds have this long while past been greatly moved by the desire to make fresh efforts to pierce the dark secrets of the forbidding Antarctic regions. Belgium has just made a brave single-handed attempt; a private enterprise sailing from these shores is struggling there now, lost for the present to our view; and this year we in England and our brethren in Germany are, thanks to the promised aid of the respective governments, and no less to private liberality, in which this association takes its share, able to begin the preparation of carefully organized expeditions. That international amity of which I am speaking is illustrated by the fact that in this country and in that there is not only a great desire but a firm purpose to secure the fullest coöperation between the expeditions which will leave the two shores. If in this momentous attempt any rivalry be shown between the two nations, it will be for each a rivalry, not in forestalling, but in assisting the other. May I add that if the story of the past may seem to give our nation some claim to the seas as more peculiarly our own, that claim bespeaks a duty likewise peculiarly our own, to leave no effort untried by which we may plumb the seas' yet unknown depths and trace their yet unknown shores? That claim, if it means anything, means that when

nations are joining hands in the dangerous work of exploring the unknown South, the larger burden of the task should fall to Britain's share; it means that we in this country should see to it, and see to it at once, that the concerted Antarctic expedition which in some two years or so will leave the shores of Germany, of England, and perhaps of other lands should, so far as we are concerned, be so equipped and so sustained that the risk of failure and disaster may be made as small, and the hope of being able not merely to snatch a hurried glimpse of lands not yet seen, but to gather in with full hands a rich harvest of the facts which men not of one science only, but of many, long to know, as great as possible.

Another international scientific effort demands a word of notice. The need which every inquirer in science feels to know, and to know quickly, what his fellow-worker, wherever on the globe he may be carrying on his work or making known his results, has done or is doing, led some four years back to a proposal for carrying out by international coöperation a complete current index, issued promptly, of the scientific literature of the world. Though much labor in many lands has been spent upon the undertaking, the project is not yet an accomplished fact. Nor can this, perhaps, be wondered at, when the difficulties of the task are weighed. Difficulties of language, difficulties of driving in one team all the several sciences which, like young horses, wish each to have its head free with leave to go its own way, difficulties mechanical and financial, of press and post, difficulties raised by existing interests — these and yet other difficulties are obstacles not easy to be overcome. The most striking and the most encouraging features of the deliberations which have now been going on for three years have been the repeated expressions, coming not from this or that quarter only, but from almost all quarters, of an earnest desire that the effort should succeed, of a sincere belief in the good of international coöperation, and of a willingness to sink as far as possible individual interests for the sake of the common cause. In the face

of such a spirit we may surely hope that the many difficulties will ultimately pass out of sight.

Perhaps, however, not the least notable fact of international coöperation in science is the proposal which has been made within the last two years that the leading academies of the world should, by representatives, meet at intervals to discuss questions in which the learned of all lands are interested. A month hence a preliminary meeting of this kind will be held at Wiesbaden; and it is at least probable that the closing year of that nineteenth century in which science has played so great a part may at Paris during the great World's Fair — which every friend, not of science only, but of humanity, trusts may not be put aside or even injured through any untoward event, and which promises to be an occasion not of pleasurable sight-seeing only, but also, by its many international congresses, of international communing in the search for truth — witness the first select Witenagemote of the science of the world.

I make no apology for having thus touched on international coöperation. I should have been wanting had I not done so on the memorable occasion of this meeting. A hundred years ago two great nations were grappling with each other in a fierce struggle which had lasted, with pauses, for many years, and which was to last for many years to come; war was on every lip and in almost every heart. To-day this meeting has, by a common wish, been so arranged that those two nations should, in the persons of their men of science, draw as near together as they can, with nothing but the narrow streak of the channel between them, in order that they may take counsel together on matters in which they have one interest and a common hope. May we not look upon this brotherly meeting as one of many signs that science, though she works in a silent manner and in ways unseen by many, is steadily making for peace?

Looking back, then, in this last year of the eighteen hundreds, on the century which is drawing to a close, while we may see in the history of scientific inquiry much which, telling the man

of science of his shortcomings and his weakness, bids him be humble, we also see much, perhaps more, which gives him hope. Hope is, indeed, one of the watchwords of science. In the latter-day writings of some who know not science much may be read which shows that the writer is losing or has lost hope in the future of mankind. There are not a few of these; their repeated utterances make a sign of the times. Seeing in matters lying outside science few marks of progress and many tokens of decline or decay, recognizing in science its material benefits only, such men have thoughts of despair when they look forward to the times to come. But if there be any truth in what I have attempted to urge to-night, if the intellectual, if the moral influences of science are no less marked than her material benefits, if, moreover, that which she has done is but the earnest of that which she shall do, such men may pluck up courage and gather strength by laying hold of her garment. We men of science at least need not share their views or their fears. Our feet are set, not on the shifting sands of the opinions and of the fancies of the day, but on a solid foundation of verified truth, which by the labors of each succeeding age is made broader and more firm. To us the past is a thing to look back upon, not with regret, not as something which has been lost never to be regained, but with content, as something whose influence is with us still, helping us on our further way. With us, indeed, the past points not to itself, but to the future; the golden age is in front of us, not behind us; that which we do know is a lamp whose brightest beams are shed into the unknown before us, showing us how much there is in front and lighting up the way to reach it. We are confident in the advance because, as each one of us feels that any step forward which he may make is not ordered by himself and is not the result of his own sole efforts in the present, but is, and that in large measure, the outcome of the labors of others in the past, so each one of us has the sure and certain hope that as the past has helped him, so his efforts, be they great or be they small, will be a help to those to come.

ON THE PHYSICAL BASIS OF LIFE¹

THOMAS HENRY HUXLEY

IN order to make the title of this discourse generally intelligible, I have translated the term "Protoplasm," which is the scientific name of the substance of which I am about to speak, by the words "the physical basis of life." I suppose that, to many, the idea that there is such a thing as a physical basis, or matter, of life may be novel — so widely spread is the conception of life as a something which works through matter, but is independent of it; and even those who are aware that matter and life are inseparably connected, may not be prepared for the conclusion plainly suggested by the phrase, "*the* physical basis or matter of life," that there is some one kind of matter which is common to all living beings, and that their endless diversities are bound together by a physical, as well as an ideal, unity. In fact, when first apprehended, such a doctrine as this appears almost shocking to common sense.

What, truly, can seem to be more obviously different from one another, in faculty, in form, and in substance, than the various kinds of living beings? What community of faculty can there be between the brightly-colored lichen, which so nearly resembles a mere mineral incrustation of the bare rock on which it grows, and the painter, to whom it is instinct with beauty, or the botanist, whom it feeds with knowledge?

Again, think of the microscopic fungus — a mere infinitesimal ovoid particle, which finds space and duration enough to

¹ The substance of this paper was contained in an address which was delivered in Edinburgh in 1868. The paper was published in *Lay Sermons*, 1870.

multiply into countless millions in the body of a living fly; and then of the wealth of foliage, the luxuriance of flower and fruit, which lies between this bald sketch of a plant and the giant pine of California, towering to the dimensions of a cathedral spire, or the Indian fig, which covers acres with its profound shadow, and endures while nations and empires come and go around its vast circumference. Or, turning to the other half of the world of life, picture to yourselves the great Finner whale, hugest of beasts that live, or have lived, disporting his eighty or ninety feet of bone, muscle, and blubber, with easy roll, among waves in which the stoutest ship that ever left dockyard would flounder hopelessly; and contrast him with the invisible animalcules — mere gelatinous specks, multitudes of which could, in fact, dance upon the point of a needle with the same ease as the angels of the Schoolmen could, in imagination. With these images before your minds, you may well ask, what community of form, or structure, is there between the animalcule and the whale; or between the fungus and the fig-tree? And, *à fortiori*,¹ between all four?

Finally, if we regard substance, or material composition, what hidden bond can connect the flower which a girl wears in her hair and the blood which courses through her youthful veins; or, what is there in common between the dense and resisting mass of the oak, or the strong fabric of the tortoise, and those broad disks of glassy jelly which may be seen pulsating through the waters of a calm sea, but which drain away to mere films in the hand which raises them out of their element?

Such objections as these must, I think, arise in the mind of everyone who ponders, for the first time, upon the conception of a single physical basis of life underlying all the diversities of vital existence; but I propose to demonstrate to you that, notwithstanding these apparent difficulties, a threefold unity — namely, a unity of power or faculty, a unity of form, and a unity of substantial composition — does pervade the whole world.

¹ With stronger reason.

No very abstruse argumentation is needed, in the first place, to prove that the powers, or faculties, of all kinds of living matter, diverse as they may be in degree, are substantially similar in kind.

Goethe has condensed a survey of all powers of mankind into the well-known epigram:

“Warum treibt sich das Volk so und schreit? Es will sich ernähren,
Kinder zeugen, und die nähren so gut es vermag.

· · · · ·
Weiter bringt est kein Mensch, stell’ er sich wie er auch will.”¹

In physiological language this means that all the multifarious and complicated activities of man are comprehensible under three categories. Either they are immediately directed towards the maintenance and development of the body, or they effect transitory changes in the relative positions of parts of the body, or they tend towards the continuance of the species. Even those manifestations of intellect, of feeling, and of will, which we rightly name the higher faculties, are not excluded from this classification, inasmuch as to everyone but the subject of them they are known only as transitory changes in the relative positions of parts of the body. Speech, gesture, and every other form of human action are, in the long run, resolvable into muscular contraction, and muscular contraction is but a transitory change in the relative positions of the parts of a muscle. But the scheme which is large enough to embrace the activities of the highest form of life covers all those of the lower creatures. The lowest plant, or animalcule, feeds, grows, and reproduces its kind. In addition, all animals manifest those transitory changes of form which we class under irritability and contractility; and it is more than probable that when the vegetable world is thoroughly explored, we shall find all plants in possession of the same powers, at one time or other of their existence.

¹ Why does the populace rush so and make clamor? It wishes to eat, bring forth children, and feed these as well as it may. . . . No man can do better, strive how he will.

I am not now alluding to such phenomena, at once rare and conspicuous, as those exhibited by the leaflets of the sensitive plants, or the stamens of the barberry, but to much more widely spread, and at the same time more subtle and hidden, manifestations of vegetable contractility. You are doubtless aware that the common nettle owes its stinging property to the innumerable stiff and needle-like, though exquisitely delicate, hairs which cover its surface. Each stinging-needle tapers from a broad base to a slender summit, which, though rounded at the end, is of such microscopic fineness that it readily penetrates, and breaks off, in the skin. The whole hair consists of a very delicate outer case of wood, closely applied to the inner surface of which is a layer of semi-fluid matter, full of innumerable granules of extreme minuteness. This semi-fluid lining is protoplasm, which thus constitutes a kind of bag, full of a limpid liquid, and roughly corresponding in form with the interior of the hair which it fills. When viewed with a sufficiently high magnifying power, the protoplasmic layer of the nettle hair is seen to be in a condition of unceasing activity. Local contractions of the whole thickness of its substance pass slowly and gradually from point to point, and give rise to the appearance of progressive waves, just as the bending of successive stalks of corn by a breeze produces the apparent billows of a corn-field.

But, in addition to these movements, and independently of them, the granules are driven, in relatively rapid streams, through channels in the protoplasm which seem to have a considerable amount of persistence. Most commonly, the currents in adjacent parts of the protoplasm take similar directions; and, thus, there is a general stream up one side of the hair and down the other. But this does not prevent the existence of partial currents which take different routes; and sometimes trains of granules may be seen coursing swiftly in opposite directions within a twenty-thousandth of an inch of one another; while, occasionally, opposite streams come into direct collision

and, after a longer or shorter struggle, one predominates. The cause of these currents seems to lie in contractions of the protoplasm which bounds the channels in which they flow, but which are so minute that the best microscopes show only their effects, and not themselves.

The spectacle afforded by the wonderful energies prisoned within the compass of the microscopic hair of a plant, which we commonly regard as a merely passive organism, is not easily forgotten by one who has watched its display, continued hour after hour, without pause or sign of weakening. The possible complexity of many other organic forms, seemingly as simple as the protoplasm of the nettle, dawns upon one; and the comparison of such a protoplasm to a body with an internal circulation, which has been put forward by an eminent physiologist, loses much of its startling character. Currents similar to those of the hairs of the nettle have been observed in a great multitude of very different plants, and weighty authorities have suggested that they probably occur, in more or less perfection, in all young vegetable cells. If such be the case, the wonderful noonday silence of a tropical forest is, after all, due only to the dullness of our hearing; and could our ears catch the murmur of these tiny Maelstroms, as they whirl in the innumerable myriads of living cells which constitute each tree, we should be stunned, as with the roar of a great city.

Among the lower plants, it is the rule rather than the exception that contractility should be still more openly manifested during some periods of their existence. The protoplasm of *Algæ* and *Fungi* becomes, under many circumstances, partially, or completely, freed from its woody case, and exhibits movements of its whole mass, or is propelled by the contractility of one, or more, hair-like prolongations of its body which are called vibratile cilia. And, so far as the conditions of the manifestation of the phenomena of contractility have yet been studied, they are the same for the plant as for the animal. Heat and electric shocks influence both, and in the same way, though it may be in different

degrees. It is by no means my intention to suggest that there is no difference in faculty between the lowest plant and the highest, or between plants and animals. But the difference between the powers of the lowest plant, or animal, and those of the highest, is one of degree, not of kind, and depends, as Milne-Edwards long ago so well pointed out, upon the extent to which the principle of the division of labor is carried out in the living economy. In the lowest organism all parts are competent to perform all functions, and one and the same portion of protoplasm may successfully take on the function of feeding, moving, or reproducing apparatus. In the highest, on the contrary, a great number of parts combine to perform each function, each part doing its allotted share of the work with great accuracy and efficiency, but being useless for any other purpose.

On the other hand, notwithstanding all the fundamental resemblances which exist between the powers of the protoplasm in plants and in animals, they present a striking difference (to which I shall advert more at length presently), in the fact that plants can manufacture fresh protoplasm out of mineral compounds, whereas animals are obliged to procure it ready made, and hence, in the long run, depend upon plants. Upon what condition this difference in the powers of the two great divisions of the world of life depends, nothing is at present known.

With such qualifications as arise out of the last-mentioned fact, it may be truly said that the acts of all living things are fundamentally one. Is any such unity predicable of their forms? Let us seek in easily verified facts for a reply to this question. If a drop of blood be drawn by pricking one's finger, and viewed with proper precautions, and under a sufficiently high microscopic power, there will be seen, among the innumerable multitude of little, circular, discoidal bodies, or corpuscles, which float in it and give it its color, a comparatively small number of colorless corpuscles, of somewhat larger size and very irregular shape. If the drop of blood be kept at the temperature of the

body, these colorless corpuscles will be seen to exhibit a marvellous activity, changing their forms with great rapidity, drawing in and thrusting out prolongations of their substances, and creeping about as if they were independent organisms.

The substance which is thus active is a mass of protoplasm, and its activity differs in detail, rather than in principle, from that of the protoplasm of the nettle. Under sundry circumstances the corpuscle dies and becomes distended into a round mass, in the midst of which is seen a smaller spherical body, which existed, but was more or less hidden, in the living corpuscle, and is called its *nucleus*. Corpuscles of essentially similar structure are to be found in the skin, in the lining of the mouth, and scattered through the whole framework of the body. Nay, more: in the earliest condition of the human organism, in that state in which it has but just become distinguishable from the egg in which it arises, it is nothing but an aggregation of such corpuscles, and every organ of the body was, once, no more than such an aggregation.

Thus a nucleated mass of protoplasm turns out to be what may be termed the structural unit of the human body. As a matter of fact, the body, in its earliest state, is a mere multiple of such units; and, in its perfect condition, it is a multiple of such units, variously modified.

But does the formula which expresses the essential structural character of the highest animal cover all the rest, as the statement of its powers and faculties covered that of all others? Very nearly. Beast and fowl, reptile and fish, mollusk, worm, and polype, are all composed of structural units of the same character, namely, masses of protoplasm with a nucleus. There are sundry very low animals each of which, structurally, is a mere colorless blood-corpuscle, leading an independent life. But, at the very bottom of the animal scale, even this simplicity becomes simplified, and all the phenomena of life are manifested by a particle of protoplasm without a nucleus. Nor are such organisms insignificant by reason of their want of complexity.

It is a fair question whether the protoplasm of those simplest forms of life, which people an immense extent of the bottom of the sea, would not outweigh that of all the higher living beings which inhabit the land put together. And in ancient times, no less than at the present day, such living beings as these have been the greatest of rock builders.

What has been said of the animal world is no less true of plants. Imbedded in the protoplasm at the broad, or attached, end of the nettle hair, there lies a spheroidal nucleus. Careful examination further proves that the whole substance of the nettle is made up of a repetition of such masses of nucleated protoplasm, each contained in a wooden case, which is modified in form, sometimes into a woody fiber, sometimes into a duct or spiral vessel, sometimes into a pollen grain, or an ovule. Traced back to its earliest state, the nettle arises as the man does, in a particle of nucleated protoplasm. And in the lowest plants, as in the lowest animals, a single mass of such protoplasm may constitute the whole plant, or the protoplasm may exist without a nucleus.

Under these circumstances it may well be asked, how is one mass of non-nucleated protoplasm to be distinguished from another? Why call one "plant" and the other "animal"?

The only reply is that, so far as form is concerned, plants and animals are not separable, and that, in many cases, it is a mere matter of convention whether we call a given organism an animal or a plant. There is a living body called *Æthidium septicum*, which appears upon decaying vegetable substances, and, in one of its forms, is common upon the surfaces of tan-pits. In this condition it is, to all intents and purposes, a fungus, and formerly was always regarded as such; but the remarkable investigations of De Bary have shown that, in another condition, the *Æthidium* is an actively locomotive creature, and takes in solid matters, upon which, apparently, it feeds, thus exhibiting the most characteristic feature of animality. Is this a plant; or is it an animal? Is it both; or is it neither? Some decide

in favor of the last supposition, and establish an intermediate kingdom, a sort of biological No Man's Land for all these questionable forms. But, as it is admittedly impossible to draw any distinct boundary line between this no man's land and the vegetable world on the one hand, or the animal on the other, it appears to me that this proceeding merely doubles the difficulty which, before, was single.

Protoplasm, simple or nucleated, is the formal basis of all life. It is the clay of the potter, which, bake it and paint it as he will, remains clay, separated by artifice, and not by nature, from the commonest brick or sun-dried clod.

Thus it becomes clear that all living powers are cognate, and that all living forms are fundamentally of one character. The researches of the chemist have revealed a no less striking uniformity of material composition in living matter.

In perfect strictness, it is true that chemical investigation can tell us little or nothing, directly, of the composition of living matter, inasmuch as such matter must needs die in the act of analysis, — and upon this very obvious ground, objections, which I confess seem to me to be somewhat frivolous, have been raised to the drawing of any conclusions whatever respecting the composition of actually living matter, from that of the dead matter of life, which alone is accessible to us. But objectors of this class do not seem to reflect that it is also, in strictness, true that we know nothing about the composition of any body whatever, as it is. The statement that a crystal of calc-spar consists of carbonate of lime is quite true, if we only mean that, by appropriate processes, it may be resolved into carbonic acid and quicklime. If you pass the same carbonic acid over the very quicklime thus obtained, you will obtain carbonate of lime again; but it will not be calc-spar, nor anything like it. Can it, therefore, be said that chemical analysis teaches nothing about the chemical composition of calc-spar? Such a statement would be absurd; but it is hardly more so than the talk one occasionally hears about the uselessness of applying

the results of chemical analysis to the living bodies which have yielded them.

One fact, at any rate, is out of reach of such refinements, and this is, that all the forms of protoplasm which have yet been examined contain the four elements, carbon, hydrogen, oxygen, and nitrogen, in very complex union, and that they behave similarly towards several reagents. To this complex combination, the nature of which has never been determined with exactness, the name of Protein has been applied. And if we use this term with such caution as may properly arise out of our comparative ignorance of the things for which it stands, it may be truly said that all protoplasm is proteinaceous, or, as the white, or albumen, of an egg is one of the commonest examples of a nearly pure protein matter, we may say that all living matter is more or less albuminoid.

Perhaps it would not yet be safe to say that all forms of protoplasm are affected by the direct action of electric shocks; and yet the number of cases in which the contraction of protoplasm is shown to be affected by this agency increases every day.

Nor can it be affirmed with perfect confidence that all forms of protoplasm are liable to undergo that peculiar coagulation at a temperature of 40° – 50° Centigrade, which has been called "heat-stiffening," though Kühne's beautiful researches have proved this occurrence to take place in so many and such diverse living beings, that it is hardly rash to expect that the law holds good for all.

Enough has, perhaps, been said, to prove the existence of a general uniformity in the character of the protoplasm, or physical basis, of life, in whatever group of living beings it may be studied. But it will be understood that this general uniformity by no means excludes any amount of special modifications of the fundamental substance. The mineral, carbonate of lime, assumes an immense diversity of characters, though no one doubts that, under all these Protean changes, it is one and the same thing.

And now, what is the ultimate fate, and what the origin, of the matter of life?

Is it, as some of the older naturalists supposed, diffused throughout the universe in molecules, which are indestructible and unchangeable in themselves, but, in endless transmigration, unite in innumerable permutations, into the diversified forms of life we know? Or, is the matter of life composed of ordinary matter, differing from it only in the manner in which its atoms are aggregated? Is it built up of ordinary matter, and again resolved into ordinary matter when its work is done?

Modern science does not hesitate a moment between these alternatives. Physiology writes over the portals of life —

“Debemur morti nos nostraque,”¹

with a profounder meaning than the Roman poet attached to that melancholy line. Under whatever disguise it takes refuge, whether fungus or oak, worm or man, the living protoplasm not only ultimately dies and is resolved into its mineral and lifeless constituents, but is always dying, and, strange as the paradox may sound, could not live unless it died.

In the wonderful story of the *Peau de Chagrin*, the hero becomes possessed of a magical wild ass's skin, which yields him the means of gratifying all his wishes. But its surface represents the duration of the proprietor's life; and for every satisfied desire the skin shrinks in proportion to the intensity of fruition, until at length life and the last handbreadth of the *peau de chagrin* disappear with the gratification of a last wish.

Balzac's studies had led him over a wide range of thought and speculation, and his shadowing forth of physiological truth in this strange story may have been intentional. At any rate, the matter of life is a veritable *peau de chagrin*, and for every vital act it is somewhat the smaller. All work implies waste, and the work of life results, directly or indirectly, in the waste of protoplasm.

¹ We and ours must die.

Every word uttered by a speaker costs him some physical loss; and, in the strictest sense, he burns that others may have light — so much eloquence, so much of his body resolved into carbonic acid, water, and urea. It is clear that this process of expenditure cannot go on forever. But, happily, the protoplasmic *peau de chagrin* differs from Balzac's in its capacity of being repaired, and brought back to its full size, after every exertion.

For example, this present lecture, whatever its intellectual worth to you, has a certain physical value to me, which is, conceivably, expressible by the number of grains of protoplasm and other bodily substance wasted in maintaining my vital processes during its delivery. My *peau de chagrin* will be distinctly smaller at the end of the discourse than it was at the beginning. By and by, I shall probably have recourse to the substance commonly called mutton, for the purpose of stretching it back to its original size. Now this mutton was once the living protoplasm, more or less modified, of another animal — a sheep. As I shall eat it, it is the same matter altered, not only by death, but by exposure to sundry artificial operations in the process of cooking.

But these changes, whatever be their extent, have not rendered it incompetent to resume its old functions as matter of life. A singular inward laboratory, which I possess, will dissolve a certain portion of the modified protoplasm; the solution so formed will pass into my veins; and the subtle influences to which it will then be subjected will convert the dead protoplasm into living protoplasm, and transubstantiate sheep into man.

Nor is this all. If digestion were a thing to be trifled with, I might sup upon lobster, and the matter of life of the crustacean would undergo the same wonderful metamorphosis into humanity. And were I to return to my own place by sea, and undergo shipwreck, the crustacean might, and probably would, return the compliment, and demonstrate our common nature by turning my protoplasm into living lobster. Or, if nothing better were

to be had, I might supply my wants with mere bread, and I should find the protoplasm of the wheat-plant to be convertible into man with no more trouble than that of the sheep, and with far less, I fancy, than that of the lobster.

Hence it appears to be a matter of no great moment what animal, or what plant, I lay under contribution for protoplasm, and the fact speaks volumes for the general identity of that substance in all living beings. I share this catholicity of assimilation with other animals, all of which so far as we know could thrive equally well on the protoplasm of any of their fellows, or of any plant; but here the assimilative powers of the animal world cease. A solution of smelling-salts in water, with an infinitesimal proportion of some other saline matters, contains all the elementary bodies which enter into the composition of protoplasm; but, as I need hardly say, a hogshead of that fluid would not keep a hungry man from starving, nor would it save any animal whatever from a like fate. An animal cannot make protoplasm, but must take it ready-made from some other animal, or some plant — the animal's highest feat of constructive chemistry being to convert dead protoplasm into that living matter of life which is appropriate to itself.

Therefore, in seeking for the origin of protoplasm, we must eventually turn to the vegetable world. A fluid containing carbonic acid, water, and nitrogenous salts, which offers such a Barmecide feast¹ to the animal, is a table richly spread to multitudes of plants; and, with a due supply of only such materials, many a plant will not long maintain itself in vigor, but grow and multiply until it has increased a million-fold, or a million million-fold, the quantity of protoplasm which it originally possessed; in this way building up the matter of life, to an indefinite extent, from the common matter of the universe.

Thus, the animal can only raise the complex substance of dead protoplasm to the higher power, as one may say, of living

¹ In one of the Arabian Nights stories, a nobleman called Barmecide set before a beggar a number of empty dishes supposed to contain a feast.

protoplasm; while the plant can raise the less complex substances — carbonic acid, water, and nitrogenous salts — to the same stage of living protoplasm, if not to the same level. But the plant also has its limitations. Some of the fungi, for example, appear to need higher compounds to start with; and no known plant can live upon the uncompounded elements of protoplasm. A plant supplied with pure carbon, hydrogen, oxygen, and nitrogen, phosphorus, sulphur, and the like, would as infallibly die as the animal in his bath of smelling-salts, though it would be surrounded by all the constituents of protoplasm. Nor, indeed, need the process of simplification of vegetable food be carried so far as this, in order to arrive at the limit of the plant's thau-maturgy. Let water, carbonic acid, and all the other needful constituents be supplied except nitrogenous salts, and an ordinary plant will still be unable to manufacture protoplasm.

Thus the matter of life, so far as we know it (and we have no right to speculate on any other), breaks up, in consequence of that continual death which is the condition of its manifesting vitality, into carbonic acid, water, and nitrogenous compounds, which certainly possess no properties but those of ordinary matter. And out of these same forms of ordinary matter, and from none which are simpler, the vegetable world builds up all the protoplasm which keeps the animal world a-going. Plants are the accumulators of the power which animals distribute and disperse.

But it will be observed that the existence of the matter of life depends on the preëxistence of certain compounds, namely, carbonic acid, water, and certain nitrogenous bodies. Withdraw any one of these three from the world, and all vital phenomena come to an end. They are as necessary to the protoplasm of the plant, as the protoplasm of the plant is to that of the animal. Carbon, hydrogen, oxygen, and nitrogen are all lifeless bodies. Of these, carbon and oxygen unite in certain proportions and under certain conditions, to give rise to carbonic acid; hydrogen and oxygen produce water; nitrogen and other

elements give rise to nitrogenous salts. These new compounds, like the elementary bodies of which they are composed, are lifeless. But when they are brought together, under certain conditions, they give rise to the still more complex body, protoplasm, and this protoplasm exhibits the phenomena of life.

I see no break in this series of steps in molecular complication, and I am unable to understand why the language which is applicable to any one term of the series may not be used to any of the others. We think fit to call different kinds of matter carbon, oxygen, hydrogen, and nitrogen and to speak of the various powers and activities of these substances as the properties of the matter of which they are composed.

When hydrogen and oxygen are mixed in a certain proportion, and an electric spark is passed through them, they disappear, and a quantity of water, equal in weight to the sum of their weights, appears in their place. There is not the slightest parity between the passive and active powers of the water and those of the oxygen and hydrogen which have given rise to it. At 32° Fahrenheit, and far below that temperature, oxygen and hydrogen are elastic gaseous bodies, whose particles tend to rush away from one another with great force. Water, at the same temperature, is a strong though brittle solid, whose particles tend to cohere into definite geometrical shapes, and sometimes build up frosty imitations of the most complex forms of vegetable foliage.

Nevertheless we call these, and many other strange phenomena, the properties of the water, and we do not hesitate to believe that, in some way or another, they result from the properties of the component elements of the water. We do not assume that a something called "aquosity" entered into and took possession of the oxidated hydrogen as soon as it was formed, and then guided the aqueous particles to their places in the facets of the crystal, or amongst the leaflets of the hoar-frost. On the contrary, we live in the hope and in the faith that, by the advance of molecular physics, we shall

by and by be able to see our way as clearly from the constituents of water to the properties of water as we are now able to deduce the operations of a watch from the form of its parts and the manner in which they are put together.

Is the case in any way changed when carbonic acid, water, and nitrogenous salts disappear, and in their place, under the influence of preëxisting living protoplasm, an equivalent weight of the matter of life makes its appearance?

It is true that there is no sort of parity between the properties of the components and the properties of the resultant, but neither was there in the case of the water. It is also true that what I have spoken of as the influence of preëxisting living matter is something quite unintelligible; but does anybody quite comprehend the *modus operandi*¹ of an electric spark, which traverses a mixture of oxygen and hydrogen?

What justification is there, then, for the assumption of the existence in the living matter of a something which has no representative, or correlative, in the not living matter which gave rise to it? What better philosophical status has "vitality" than "aquosity"? And why should "vitality" hope for a better fate than the other "itys" which have disappeared since Martinus Scriblerus accounted for the operation of the meat-jack by its inherent "meat-roasting quality," and scorned the "materialism" of those who explained the turning of the spit by a certain mechanism worked by the draught of the chimney?

If scientific language is to possess a definite and constant signification whenever it is employed, it seems to me that we are logically bound to apply to the protoplasm, or physical basis of life, the same conceptions as those which are held to be legitimate elsewhere. If the phenomena exhibited by water are its properties, so are those presented by protoplasm, living or dead, its properties.

If the properties of water may be properly said to result from the nature and disposition of its component molecules,

¹ Mode of working.

I can find no intelligible ground for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules.

But I bid you beware that, in accepting these conclusions, you are placing your feet on the first rung of a ladder which, in most people's estimation, is the reverse of Jacob's and leads to the antipodes of heaven. It may seem a small thing to admit that the dull, vital actions of a fungus, or a foraminifer, are the properties of their protoplasm, and are the direct results of the nature of the matter of which they are composed. But if, as I have endeavored to prove to you, their protoplasm is essentially identical with, and most readily converted into, that of any animal, I can discover no logical halting-place between the admission that such is the case, and the further concession that all vital action may, with equal propriety, be said to be the result of the molecular forces of the protoplasm which displays it. And if so, it must be true, in the same sense and to the same extent, that the thoughts to which I am now giving utterance, and your thoughts regarding them, are the expression of molecular changes in that matter of life which is the source of our other vital phenomena.

Past experience leads me to be tolerably certain that, when the propositions I have just placed before you are accessible to public comment and criticism, they will be condemned by many zealous persons, and perhaps by some few of the wise and thoughtful. I should not wonder if "gross and brutal materialism" were the mildest phrase applied to them in certain quarters. And, most undoubtedly, the terms of the propositions are distinctly materialistic. Nevertheless two things are certain: the one, that I hold the statements to be substantially true; the other, that I, individually, am no materialist, but, on the contrary, believe materialism to involve grave philosophical error.

This union of materialistic terminology with the repudiation of materialistic philosophy I share with some of the most thoughtful men with whom I am acquainted. And, when I first under-

took to deliver the present discourse, it appeared to me to be a fitting opportunity to explain how such a union is not only consistent with, but necessitated by, sound logic. I purposed to lead you through the territory of vital phenomena to the materialistic slough in which you find yourselves now plunged, and then to point out to you the sole path by which, in my judgment, extrication is possible.

Let us suppose that knowledge is absolute, and not relative, and therefore that our conception of matter represents that which it really is. Let us suppose, further, that we do know more of cause and effect than a certain definite order of succession among facts, and that we have a knowledge of the necessity of that succession — and hence, of necessary laws — and I, for my part, do not see what escape there is from utter materialism and necessarianism. For it is obvious that our knowledge of what we call the material world is, to begin with, at least as certain and definite as that of the spiritual world, and that our acquaintance with law is of as old a date as our knowledge of spontaneity. Further, I take it to be demonstrable that it is utterly impossible to prove that anything whatever may not be the effect of a material and necessary cause, and that human logic is equally incompetent to prove that any act is really spontaneous. A really spontaneous act is one which, by the assumption, has no cause; and the attempt to prove such a negative as this is, on the face of the matter, absurd. And while it is thus a philosophical impossibility to demonstrate that any given phenomenon is not the effect of a material cause, anyone who is acquainted with the history of science will admit, that its progress has, in all ages, meant, and now, more than ever, means, the extension of the province of what we call matter and causation, and the concomitant gradual banishment from all regions of human thought of what we call spirit and spontaneity.

I have endeavored, in the first part of this discourse, to give you a conception of the direction towards which modern physi-

ology is tending; and I ask you, what is the difference between the conception of life as the product of a certain disposition of material molecules, and the old notion of an Archæus¹ governing and directing blind matter within each living body, except this — that here, as elsewhere, matter and law have devoured spirit and spontaneity? And as surely as every future grows out of past and present, so will the physiology of the future gradually extend the realm of matter and law until it is coextensive with knowledge, with feeling, and with action.

The consciousness of this great truth weighs like a nightmare, I believe, upon many of the best minds of these days. They watch what they conceive to be the progress of materialism, in such fear and powerless anger as a savage feels when, during an eclipse, the great shadow creeps over the face of the sun. The advancing tide of matter threatens to drown their souls; the tightening grasp of law impedes their freedom; they are alarmed lest man's moral nature be debased by the increase of his wisdom.

If the "New Philosophy" be worthy of the reprobation with which it is visited, I confess their fears seem to me to be well founded. While, on the contrary, could David Hume be consulted, I think he would smile at their perplexities, and chide them for doing even as the heathen, and falling down in terror before the hideous idols their own hands have raised.

For, after all, what do we know of this terrible "matter," except as a name for the unknown and hypothetical cause of states of our own consciousness? And what do we know of that "spirit" over whose threatened extinction by matter a great lamentation is arising, like that which was heard at the death of Pan, except that it is also a name for an unknown and hypothetical cause, or condition, of states of consciousness? In other words, matter and spirit are but names for the imaginary substrata of groups of natural phenomena.

¹ Archæus: a spirit, having essentially the same form as the body within which it resided.

And what is the dire necessity and "iron" law under which men groan? Truly, most gratuitously invented bugbears. I suppose if there be an "iron" law, it is that of gravitation; and if there be a physical necessity, it is that a stone, unsupported, must fall to the ground. But what is all we really know, and can know, about the latter phenomenon? Simply, that, in all human experience, stones have fallen to the ground under these conditions; that we have not the smallest reason for believing that any stone so circumstanced will not fall to the ground; and that we have, on the contrary, every reason to believe that it will so fall. It is very convenient to indicate that all the conditions of belief have been fulfilled in this case, by calling the statement that unsupported stones will fall to the ground, "a law of Nature." But when, as commonly happens, we change *will* into *must*, we introduce an idea of necessity which most assuredly does not lie in the observed facts, and has no warranty that I can discover elsewhere. For my part, I utterly repudiate and anathematize the intruder. Fact I know; and Law I know; but what is this Necessity save an empty shadow of my own mind's throwing?

But, if it is certain that we can have no knowledge of the nature of either matter or spirit, and that the notion of necessity is something illegitimately thrust into the perfectly legitimate conception of law, the materialistic position that there is nothing in the world but matter, force, and necessity, is as utterly devoid of justification as the most baseless of theological dogmas. The fundamental doctrines of materialism, like those of spiritualism, and most other "isms," lie outside "the limits of philosophical inquiry," and David Hume's great service to humanity is his irrefragable demonstration of what these limits are. Hume called himself a skeptic, and therefore others cannot be blamed if they apply the same title to him; but that does not alter the fact that the name, with its existing implications, does him gross injustice.

If a man asks me what the politics of the inhabitants of the

moon are, and I reply that I do not know; that neither I, nor anyone else, has any means of knowing; and that, under these circumstances, I decline to trouble myself about the subject at all; I do not think he has any right to call me a skeptic. On the contrary, in replying thus, I conceive that I am simply honest and truthful, and show a proper regard for the economy of time. So Hume's strong and subtle intellect takes up a great many problems about which we are naturally curious and shows us that they are essentially questions of lunar politics, in their essence incapable of being answered, and therefore not worth the attention of men who have work to do in the world. And he thus ends one of his essays:

"If we take in hand any volume of Divinity, or school metaphysics, for instance, let us ask, *Does it contain any abstract reasoning concerning quantity or number?* No. *Does it contain any experimental reasoning concerning matter of fact and existence?* No. Commit it then to the flames; for it can contain nothing but sophistry and illusion."¹

Permit me to enforce this most wise advice. Why trouble ourselves about matters of which, however important they may be, we do know nothing, and can know nothing? We live in a world which is full of misery and ignorance, and the plain duty of each and all of us is to try to make the little corner he can influence somewhat less miserable and somewhat less ignorant than it was before he entered it. To do this effectually it is necessary to be fully possessed of only two beliefs: the first, that the order of Nature is ascertainable by our faculties to an extent which is practically unlimited; the second, that our volition² counts for something as a condition of the course of events.

¹ Hume's Essay "Of the Academical or Sceptical Philosophy," in the *Inquiry concerning the Human Understanding*. — [Many critics of this passage seem to forget that the subject-matter of Ethics and Æsthetics consists of matters of fact and existence. — 1892.] — Author's note.

² Or, to speak more accurately, the physical state of which volition is the expression. — 1892. — Author's note.

Each of these beliefs can be verified experimentally, as often as we like to try. Each, therefore, stands upon the strongest foundation upon which any belief can rest, and forms one of our highest truths. If we find that the ascertainment of the order of nature is facilitated by using one terminology, or one set of symbols, rather than another, it is our clear duty to use the former; and no harm can accrue so long as we bear in mind that we are dealing merely with terms and symbols.

In itself it is of little moment whether we express the phenomena of matter in terms of spirit; or the phenomena of spirit in terms of matter: matter may be regarded as a form of thought, thought may be regarded as a property of matter — each statement has a certain relative truth. But with a view to the progress of science, the materialistic terminology is in every way to be preferred. For it connects thought with the other phenomena of the universe, and suggests inquiry into the nature of those physical conditions, or concomitants of thought, which are more or less accessible to us, and a knowledge of which may, in future, help us to exercise the same kind of control over the world of thought as we already possess in respect of the material world; whereas, the alternative, or spiritualistic, terminology is utterly barren, and leads to nothing but obscurity and confusion of ideas.

Thus there can be little doubt that, the further science advances, the more extensively and consistently will all the phenomena of Nature be represented by materialistic formulæ and symbols.

But the man of science, who, forgetting the limits of philosophical inquiry, slides from these formulæ and symbols into what is commonly understood by materialism, seems to me to place himself on a level with the mathematician who should mistake the x 's and y 's with which he works his problems for real entities — and with this further disadvantage, as compared with the mathematician, that the blunders of the latter are of no practical consequence, while the errors of systematic materialism may paralyze the energies and destroy the beauty of a life.

SCOPE AND LIMIT OF SCIENTIFIC MATERIALISM ¹

JOHN TYNDALL

PARTLY through mathematical and partly through experimental research, physical science has of late years assumed a momentous position in the world. Both in a material and in an intellectual point of view it has produced, and is designed to produce, immense changes—vast social ameliorations, and vast alterations in the popular conception of the origin, rule, and governance of natural things. By science, in the physical world, miracles are wrought, while philosophy is forsaking its ancient metaphysical channels and pursuing others which have been opened or indicated by scientific research. This must become more and more the case as philosophical writers become more deeply imbued with the methods of science, better acquainted with the facts which scientific men have won, and with the great theories which they have elaborated.

If you look at the face of a watch, you see the hour and minute hands, and possibly also a second hand, moving over the graduated dial: Why do these hands move, and why are their relative motions such as they are observed to be? These questions cannot be answered without opening the watch, mastering its various parts, and ascertaining their relationship to each other. When this is done, we find that the observed motion of the hands follows of necessity from the inner mechanism of the watch, when acted upon by the force invested in the spring.

The motion of the hands may be called a phenomenon of art, but the case is similar with the phenomena of nature.

¹ Reprinted from *Fragments of Science*, published by D. Appleton & Co.

These also have their inner mechanism and their store of force to set that mechanism going. The ultimate problem of physical science is to reveal this mechanism, to discern this store, and to show that, from the combined action of both, the phenomena of which they constitute the basis must of necessity flow.

I thought that an attempt to give you even a brief and sketchy illustration of the manner in which scientific thinkers regard this problem would not be uninteresting to you on the present occasion; more especially as it will give me occasion to say a word or two on the tendencies and limits of modern science; to point out the region which men of science claim as their own, and where it is mere waste of time to oppose their advance, and also to define, if possible, the bourne between this and that other region to which the questionings and yearnings of the scientific intellect are directed in vain.

But here your tolerance will be needed. It was the American Emerson, I think, who said that it is hardly possible to state any truth strongly without apparent injustice to some other truth. Truth is often of a dual character, taking the form of a magnet with two poles; and many of the differences which agitate the thinking part of mankind are to be traced to the exclusiveness with which partisan reasoners dwell upon one half of the duality in forgetfulness of the other half. The proper course appears to be to state both halves strongly, and allow each its fair share in the formation of the resultant conviction. But this waiting for the statement of the two sides of the question implies patience. It implies a resolution to suppress indignation if the statement of the one half should clash with our convictions, and to repress equally undue elation if the half-statement should happen to chime in with our views. It implies a determination to wait calmly for the statement of the whole, before we pronounce judgment in the form of either acquiescence or dissent.

This premised and, I trust, accepted, let us enter upon our task. There have been writers who affirmed that the pyramids

of Egypt were the productions of nature; and in his early youth Alexander von Humboldt wrote a learned essay with the express object of refuting this notion. We now regard the pyramids as the work of men's hands, aided probably by machinery of which no record remains. We picture to ourselves the swarming workers toiling at these vast erections, lifting the inert stones, and guided by the volition, the skill, and possibly at times by the whip of the architect, placing them in their proper positions. The blocks in this case were moved and posited by a power external to themselves, and the final form of the pyramid expresses the thought of its human builder.

Let us pass from this illustration of constructive power to another of a different kind. When a solution of common salt is slowly evaporated, the water which holds the salt in solution disappears, but the salt itself remains behind. At a certain stage of concentration the salt can no longer retain the liquid form; its particles, or molecules, as they are called, begin to deposit themselves as minute solids, so minute, indeed, as to defy all microscopic power. As evaporation continues solidification goes on, and we finally obtain, through the clustering together of innumerable molecules, a finite crystalline mass of a definite form. What is this form? It sometimes seems a mimicry of the architecture of Egypt. We have little pyramids built by the salt, terrace above terrace from base to apex, forming a series of steps resembling those up which the Egyptian traveler is dragged by his guides. The human is as little disposed to look unquestioning at these pyramidal salt crystals as to look at the pyramids of Egypt without inquiring whence they came. How, then, are those salt pyramids built up?

Guided by analogy, you may, if you like, suppose that, swarming among the constituent molecules of the salt, there is an invisible population, controlled and coerced by some invisible master, and placing the atomic blocks in their positions. This, however, is not the scientific idea, nor do I think your good sense will accept it as a likely one. The scientific idea is that

the molecules act upon each other without the intervention of slave labor; that they attract each other and repel each other at certain definite points, or poles, and in certain definite directions; and that the pyramidal form is the result of this play of attraction and repulsion. While, then, the blocks of Egypt were laid down by a power external to themselves, these molecular blocks of salt are self-positing, being fixed in their places by the forces with which they act upon each other.

I take common salt as an illustration because it is so familiar to us all; but any other crystalline substance would answer my purpose equally well. Everywhere, in fact, throughout inorganic nature, we have this formative power, as Fichte would call it — this structural energy ready to come into play and build the ultimate particles of matter into definite shapes. The ice of our winters and of our polar regions is its handiwork, and so equally are the quartz, feldspar, and mica of our rocks. Our chalk-beds are for the most part composed of minute shells, which are almost the product of structural energy; but behind the shell, as a whole, lies a more remote and subtle formative act. These shells are built up of little crystals of calc-spar, and to form these crystals the structural force had to deal with the intangible molecules of carbonate of lime. This tendency on the part of matter to organize itself, to grow into shape, to assume definite forms in obedience to the definite action of force, is, as I have said, all-pervading. It is in the ground on which you tread, in the water you drink, in the air you breathe. Incipient life, as it were, manifests itself throughout the whole of what we call inorganic nature.

The forms of the minerals resulting from this play of polar forces are various, and exhibit different degrees of complexity. Men of science avail themselves of all possible means of exploring their molecular architecture. For this purpose they employ in turn as agents of exploration, light, heat, magnetism, electricity, and sound. Polarized light is especially useful and powerful here. A beam of such light, when sent in among

the molecules of a crystal, is acted on by them, and from this action we infer with more or less of clearness the manner in which the molecules are arranged. That differences, for example, exist between the inner structure of rock salt and crystallized sugar or sugar-candy, is thus strikingly revealed. These differences may be made to display themselves in chromatic phenomena of great splendor, the play of molecular force being so regulated as to remove some of the colored constituents of white light, and to leave others with increased intensity behind.

And now let us pass from what we are accustomed to regard as a dead mineral to a living grain of corn. When *it* is examined by polarized light, chromatic phenomena similar to those noticed in crystals are observed. And why? Because the architecture of the grain resembles the architecture of the crystal. In the grain also the molecules are set in definite positions, and in accordance with their arrangement they act upon the light. But what has built together the molecules of the corn? I have already said regarding crystalline architecture that you may, if you please, consider the atoms and molecules to be placed in position by a power external to themselves. The same hypothesis is open to you now. But if in the case of crystals you have rejected this notion of an external architect, I think you are bound to reject it now, and to conclude that the molecules of the corn are self-posed by the forces with which they act upon each other. It would be poor philosophy to invoke an external agent in the one case and reject it in the other.

Instead of cutting our grain of corn into slices and subjecting it to the action of polarized light, let us place it in the earth and subject it to a certain degree of warmth. In other words, let the molecules, both of the corn and of the surrounding earth, be kept in that state of agitation which we call warmth. Under these circumstances, the grain and the substances which surround it interact, and a definite molecular architecture is the result. A bud is formed; this bud reaches the surface, where it is exposed to the sun's rays, which are also to be regarded as a

kind of vibratory motion. And as the motion of common heat, with which the grain and the substances surrounding it were first endowed, enabled the grain and these substances to exercise their attractions and repulsions, and thus to coalesce in definite forms, so the specific motion of the sun's rays now enables the green bud to feed upon the carbonic acid and the aqueous vapor of the air. The bud appropriates these constituents of both for which it has an elective attraction, and permits the other constituent to resume its place in the air. Thus the architecture is carried on. Forces are active at the root, forces are active in the blade, the matter of the earth and the matter of the atmosphere are drawn towards both, and the plant augments in size. We have in succession the bud, the stalk, the ear, the full corn in the ear; the cycle of molecular action being completed by the production of grains similar to that with which the process began.

Now there is nothing in this process which necessarily eludes the conceptive or imagining power of the purely human mind. An intellect the same in kind as our own would, if only sufficiently expanded, be able to follow the whole process from beginning to end. It would see every molecule placed in its position by the specific attractions and repulsions exerted between it and other molecules, the whole process and its consummation being an instance of the play of molecular force. Given the grain and its environment, the purely human intellect might, if sufficiently expanded, trace out *a priori* every step of the process of growth, and by the application of purely mechanical principles demonstrate that the cycle must end, as it is seen to end, in the reproduction of forms like that with which it began. A similar necessity rules here to that which rules the planets in their circuits round the sun.

You will notice that I am stating my truth strongly, as at the beginning we agreed it should be stated. But I must go still further, and affirm that in the eye of science *the animal body* is just as much a product of molecular force as the stalk and ear

of corn, or as the crystal of salt or sugar. Many of the parts of the body are obviously mechanical. Take the human heart, for example, with its system of valves, or take the exquisite mechanism of the eye or hand. Animal heat, moreover, is the same in kind as the heat of a fire, being produced by the same chemical process. Animal motion, too, is as directly derived from the food of the animal as the motion of Trevethyck's walking engine from the fuel in its furnace. As regards matter, the animal body creates nothing; as regards force, it creates nothing. Which of you by taking thought can add one cubit to his stature? All that has been said, then, regarding the plant may be restated with regard to the animal. Every particle that enters into the composition of a muscle, a nerve, or a bone has been placed in its position by molecular force. And, unless the existence of law in these matters is denied, and the element of caprice introduced, we must conclude that, given the relation of any molecule of the body to its environment, its position in the body might be determined mathematically. Our difficulty is not with the *quality* of the problem, but with its *complexity*; and this difficulty might be met by the simple expansion of the faculties which we now possess. Given this expansion, with the necessary data, and the chick might be decided as rigorously and as logically from the egg as the existence of Neptune was deduced from the disturbances of Uranus, or as conical refraction was deduced from the undulatory theory of light.

You see I am not mincing matters, but avowing nakedly what many scientific thinkers more or less distinctively believe. The formation of a crystal, plant, or an animal is in their eyes a purely mechanical problem, which differs from the problems of ordinary mechanics in the smallness of the masses and the complexity of the processes involved. Here you have one half of our dual truth; let us now glance at the other half. Associated with this wonderful mechanism of the animal body we have phenomena no less certain than those of physics, but between which and the mechanism we discern no necessary connection.

A man, for example, can say *I feel, I think, I love*; but how does *consciousness* infuse itself into the problem? The human brain is said to be the organ of thought and feeling; when we are hurt the brain feels it; when we ponder it is the brain that thinks; when our passions or affections are excited it is through the instrumentality of the brain. Let us endeavor to be a little more precise here. I hardly imagine there exists a profound scientific thinker, who has reflected upon the subject, unwilling to admit the extreme probability of the hypothesis that for every fact of consciousness, whether in the domain of sense, of thought, or of emotion, a certain definite molecular condition is set up in the brain; who does not hold this relation of physics to consciousness to be invariable, so that, given the state of the brain, the corresponding thought or feeling might be inferred; or given the thought or feeling, the corresponding state of the brain might be inferred.

But how inferred? It is at bottom not a case of logical inference at all, but of empirical association. You may reply that many of the inferences of science are of this character; the inference, for example, that an electric current of a given direction will deflect a magnetic needle in a definite way; but the cases differ in this, that the passage from the current to the needle, if not demonstrable, is thinkable, and that we entertain no doubt as to the final mechanical solution of the problem. But the passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a definite thought and a definite molecular action in the brain occur simultaneously; we do not possess the intellectual organ, nor apparently any rudiment of the organ, which would enable us to pass, by a process of reasoning, from the one to the other. They appear together, but we do not know why. Were our minds and senses so expanded, strengthened, and illuminated as to enable us to see and feel the very molecules of the brain; were we capable of following all their motions, all their groupings, all their electric discharges, if such there be; and were we in-

timately acquainted with the corresponding states of thought and feeling, we should be as far as ever from the solution of the problem, "How are these physical processes connected with the facts of consciousness?" The chasm between the two classes of phenomena would still remain intellectually impassable. Let the consciousness of *love*, for example, be associated with a right-handed spiral motion of the molecules of the brain, and the consciousness of *hate* with a left-handed spiral motion. We should then know when we love that the motion is in one direction, and when we hate that the motion is in the other; but the "*WHY?*" would remain as unanswerable as before.

In affirming that the growth of the body is mechanical, and that thought, as exercised by us, has its correlative in the physics of the brain, I think the position of the "Materialist" is stated as far as that position is a tenable one. I think the materialist will be able finally to maintain this position against all attacks; but I do not think, in the present condition of the human mind, that he can pass beyond this position. I do not think he is entitled to say that his molecular groupings and his molecular motions *explain* everything. In reality they explain nothing. The utmost he can affirm is the association of two classes of phenomena, of whose real bond of union he is in absolute ignorance. The problem of the connection of body and soul is as insoluble in its modern form as it was in the pre-scientific ages. Phosphorus is known to enter into the composition of the human brain, and a trenchant German writer has exclaimed, "Ohne Phosphor, kein Gedanke."¹ That may or may not be the case, but even if we knew it to be the case, the knowledge would not lighten our darkness. On both sides of the zone here assigned to the materialist he is equally helpless. If you ask him whence is this "Matter" of which we have been discoursing, who or what divided it into molecules, who or what impressed upon them this necessity of running into organic forms, he has no answer. Science is mute in reply to these questions. But if

¹ Without phosphorus, no thought.

the materialist is confounded and science rendered dumb, who else is prepared with a solution? To whom has this arm of the Lord been revealed? Let us lower our heads and acknowledge our ignorance, priest and philosopher, one and all. Perhaps the mystery may resolve itself into knowledge at some future day. The process of things upon this earth has been one of amelioration. It is a long way from the *Iguanodon* and his contemporaries to the President and the Members of the British Association. And whether we regard the improvement from the scientific or from the theological point of view, as the result of progressive development, or as the result of successive exhibitions of creative energy, neither view entitles us to assume that man's present faculties end the series — that the process of amelioration stops at him. A time may therefore come when this ultra-scientific region by which we are now enfolded may offer itself to terrestrial, if not human, investigation. Two thirds of the rays emitted by the sun fail to arouse in the eye the sense of vision. The rays exist, but the visual organ requisite for their translation into light does not exist. And so from this region of darkness and mystery which surrounds us rays may now be darting which require but the development of the proper intellectual organs to translate them into knowledge as far surpassing ours as ours surpasses that of the wallowing reptiles which once held possession of this planet. Meanwhile the mystery is not without its uses. It certainly may be made a power in the human soul; but it is a power which has feeling, not knowledge, for its base. It may be, and will be, and we hope is turned to account, both in steadying and strengthening the intellect, and in rescuing man from that littleness to which in the struggle for existence or for precedence in the world he is continually prone.

PROGRESS¹

JOHN DEWEY

SOME persons will see only irony in a discussion of progress at the present time. Never was pessimism easier. Others will recognize in it a fine exhibition of courage and faith, and find the manifestation heartening. There is indeed every cause for discouragement. But discouragement affords just the occasion for a more intelligent courage. If our optimism was too complacent, it is because it was too thoughtless, too sentimental. Never was there a time when it was more necessary to search for the conditions upon which progress depends, until we can reaffirm our faith in its possibility upon grounds better than those upon which we have too blindly relied.

If we have been living in a fool's paradise, in a dream of automatic uninterrupted progress, it is well to be awakened. If we have been putting our trust in false gods, it is a good thing to have our confidence shaken, even rudely. We may be moved to find truer gods. If the reeds upon which we relied have broken, it is well for us to have discovered their frailty. If we have been looking in the wrong direction, we now have a sufficiently strong stimulus to direct our attention elsewhere. We can hardly welcome the war merely because it has made us think, and has made us realize how many of the things we called thoughts were asylums for laziness. But since the war has come, we may welcome whatever revelations of our stupidity and carelessness it brings with it; and set about the institution of a more manly and more responsible faith in progress than that in which we have indulged in the past.

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For there can be no blinking the fact that much of that faith was childish and irresponsible. We confused rapidity of change with advance, and we took certain gains in our own comfort and ease as signs that cosmic forces were working inevitably to improve the whole state of human affairs. Having reaped where we had not sown, our undisciplined imaginations installed in the heart of history forces which were to carry on progress whether or no, and whose advantages we were progressively to enjoy. It is easy to understand why our minds were taken captive by the spectacle of change, and why we should have confused progress with change. It is not necessary to rehearse an account of the barriers which for thousands of years kept human society static. Nor is it necessary to do more than allude to the various inventions which, by facilitating migration and travel, communication and circulation of ideas and reciprocal criticism, and the production and distribution of goods in a world-wide market, have broken down those barriers. The release of energies has gone on for a century and a half to a degree which we are still impotent to realize. Persons and things have been endlessly redistributed and mingled. The fixed has given way to the mobile; the settled to the free. It was doubtless inevitable that, in its contrast with static conditions and ideals, this mobility and freedom should be taken for progress. Such it doubtless is in some respects. But the present crisis is in vain, so far as our intelligence is concerned, if it does not make us see that in the main this rapid change of conditions affords *an opportunity* for progress, but is not itself progress.

We have confused, I repeat, rapidity of change with progress. We have confused the breaking down of barriers by which advance is made possible with advance itself. Except with respect to the conservatives who have continuously bemoaned all change as destructive these statements seem to me to sum up fairly well the intellectual history of the epoch that is closing. The economic situation, the problem of poverty by the side of great wealth, of ignorance and absence of a fair chance in life

by the side of culture and unlimited opportunity, have, indeed, always served to remind us that after all we were dealing with an opportunity for progress rather than with an accomplished fact. It reminded us that the forces which were revolutionizing society might be turned in two ways: that they actually were employed for two diverse and opposed ends. But the display was not dramatic enough, not sensational enough, to force the lesson home. The war stages the lesson in a sufficiently striking way.

We had been told that the development of industry and commerce had brought about such an interdependence of peoples that war was henceforth out of the question — at least upon a vast scale. There are men now fighting who had written and lectured to that effect. But it is now clear that commerce also creates jealousies and rivalries and suspicions which are potent for war. We were told that nations could not long finance a war under modern conditions: economists had demonstrated that to the satisfaction of themselves and others. We see now that they had underrated both the production of wealth and the extent to which it could be mobilized for destructive purposes. We were told that the advance of science had made war practically impossible. We now know that science has not only rendered the enginery of war more deadly, but has also increased the powers of resistance and endurance when war comes. If all this does not demonstrate that the forces which have brought about complicated and extensive changes in the fabric of society do not of themselves generate progress, I do not know what a demonstration would be. Has man subjugated physical nature only to release forces beyond his control?

Two things are apparent. First, progress depends not on the existence of social change but on the direction which human beings deliberately give that change. Secondly, ease of social change is a condition of progress. Side by side with the fact that the mere substitution of a dynamic or readily changing social structure for a static society does not accomplish progress,

stands the fact that this substitution furnishes the opportunity for progress. We cannot too much insist upon the fact that until men got control of natural forces civilization was a local accident. It depended upon the ability of a small number of men to command, with assurance, the labor and services of other men. Any civilization based mainly upon ability to exploit the energies of men is precarious; it is at the mercy of internal revolt and external overflow. By exploring the heaps of rubbish scattered over the face of the earth, we are just beginning to learn how many civilizations have arisen in the past only to sink into rubbish heaps. The dominion of man over the labor of other men is a shaky basis for civilization. And civilization never attained stability upon such a basis. The scientific conquest of nature has at least given us another basis. We have now a sure method. Wholesale permanent decays of civilization are impossible. As long as there exists a group of men who understand the methods of physical science and are expert in their use, recovery, under the worst of circumstances, of the material basis of culture is sure and relatively speedy. While the modern man was deceived about the amount of progress he had made, and especially deceived about the automatic certainty of progress, he was right in thinking that for the first time in history mankind is in command of the possibility of progress. The rest is for us to say.

I might almost as well stop here. For it seems to me that about all which I can say about the future of progress at the present time is that it depends upon man to say whether he wants it or not. If we want it, we can have it — if we are willing to pay the price in effort, especially in effort of intelligence. The conditions are at hand. We do not of course wholly control the energies of nature; we shall never wholly do so. But we are in possession of a method which enables us to forecast desirable physical changes and to set about securing them. So much is the secure result of the scientific revolution of the last three hundred years. We also know that it is not

possible to bring about these physical changes without effecting at the same time vast social changes. The men who invented the stationary and locomotive steam engine, and the men who have since then harnessed both steam and electricity to all sorts of ends, have produced social changes by the side of which those produced by Alexander, Cæsar, and Napoleon are insignificant. And the same process is going on as long as applied science goes on, whatever we may think about its worth. But, I repeat, while social change, thus brought about, represents an indispensable condition of progress, it does not present a guarantee for progress. The latter depends upon deliberate human foresight and socially constructive work. Hence we have, first of all, to change our attitude. Instead of congratulating ourselves upon its presence and certainty as a gift of the gods, as we have been wont to do, we have to recognize that it is a human and intentional product — as much so in principle as a telephone or irrigation or a self-binding reaper, and as much more so in fact as the factors upon which it depends are more complex and more elusive:

The doctrine of evolution has been popularly used to give a kind of cosmic sanction to the notion of an automatic and wholesale progress in human affairs. Our part, the human part, was simply to enjoy the usufruct. Evolution inherited all the goods of Divine Providence and had the advantage of being in fashion. Even a great and devastating war is not too great a price to pay for an awakening from such an infantile and selfish dream. Progress is not automatic; it depends upon human intent and aim and upon acceptance of responsibility for its production. It is not a wholesale matter, but a retail job, to be contracted for and executed in sections. I doubt if the whole history of mankind shows any more vicious and demoralizing ethic than the recent widespread belief that each of us, as individuals and as classes, might safely and complacently devote ourselves to increasing our own possessions, material, intellectual, and artistic, because progress was inevitable anyhow.

In dwelling upon the need of conceiving progress as a responsibility and not as an endowment, I put primary emphasis upon responsibility for intelligence, for the power which foresees, plans, and constructs in advance. We are so overweighted by nature with impulse, sentiment and emotion, that we are always tempted to rely unduly upon the efficacy of these things. Especially do we like to intrust our destiny to them when they go by eulogistic names — like altruism, kindness, peaceful feelings. But spite of the dogma which measures progress by increase in these sentiments, there is no reason that I know of to suppose that the basic fund of these emotions has increased appreciably in thousands and thousands of years. Man is equipped with these feelings at birth as well as with emotions of fear, anger, emulation, and resentment. What appears to be an increase in one set and a decrease in the other set is, in reality, a change in their social occasions and social channels. Civilized man has not a better endowment of ear and eye than savage man; but his social surroundings give him more important things to see and hear than the savage has, and he has the wit to devise instruments to reinforce his eye and ear — the telegraph and telephone, the microscope and telescope. But there is no reason for thinking that he has less natural aggressiveness or more natural altruism — or will ever have — than the barbarian. But he may live in social conditions that create a relatively greater demand for the display of kindness and which turn this aggressive instinct into less destructive channels. There is at any time a sufficient amount of kindly impulses possessed by man to enable him to live in amicable peace with all his fellows; and there is at any time a sufficient equipment of bellicose impulses to keep him in trouble with his fellows. An intensification of the exhibition of one may accompany an intensification of the display of the other, the only difference being that social arrangements cause the kindly feelings to be displayed toward one set of fellows and the hostile impulses toward another set. Thus, as everybody knows, the hatred

toward the foreigner characterizing peoples now at war is attended by an unusual manifestation of a mutual affection and love within each warring group. So characteristic is this fact that that man was a good psychologist who said that he wished that this planet might get into war with another planet, as that was the only effective way he saw of developing a world-wide community of interest in this globe's population.

I am not saying this to intimate that all impulses are equally good or that no effective control of any of them is possible. My purpose is, in lesser part, to suggest the futility of trying to secure progress by immediate or direct appeal to even the best feelings in our makeup. In the main there is an adequate fund of such feelings. What is lacking is adequate social stimulation for their exercise as compared with the social occasions which evoke less desirable emotions. In greater part, my purpose is to indicate that since the variable factor, the factor which may be altered indefinitely, is the social conditions which call out and direct the impulses and sentiments, the positive means of progress lie in the application of intelligence to the construction of proper social devices. Theoretically, it is possible to have social arrangements which will favor the friendly tendencies of human nature at the expense of the bellicose and predatory ones, and which will direct the latter into channels where they will do the least harm or even become means of good. Practically this is a matter of the persistent use of reflection in the study of social conditions and the devising of social contrivances.

I have already said that the indispensable preliminary condition of progress has been supplied by the conversion of scientific discoveries into inventions which turn physical energy, the energy of sun, coal and iron, to account. Neither the discoveries nor the inventions were the product of unconscious physical nature. They were the product of human devotion and application, of human desire, patience, ingenuity and mother wit. The problem which now confronts us, the problem

of progress, is the same in kind, differing in subject-matter. It is a problem of discovering the needs and capacities of collective human nature as we find it aggregated in racial or national groups on the surface of the globe, and of inventing the social machinery which will set available powers operating for the satisfaction of those needs.

This is a large order. But it is not, with reasonable limits, one hopeless to undertake. It is much more within the bounds of legitimate imagination than would have been, five centuries ago, the subjugation of physical nature which has since been achieved. The chief difficulty lies in the primary step; it consists in getting a sufficiently large number of persons to believe in its desirability and practicability. In spite of its discipline by the achievements of physical science our imagination is cowardly and irresponsible. We do not believe that study, foresight and planning will do for the human relations of human beings what they have done for our relationship to physical nature.

We are living still under the dominion of a *laissez-faire* philosophy. I do *not* mean by this an individualistic as against a socialistic philosophy. I mean by it a philosophy which trusts the direction of human affairs to nature, or Providence, or evolution, or manifest destiny — that is to say, to accident — rather than to a contriving and constructive intelligence. To put our faith in the collective state instead of in individual activity is quite as *laissez-faire* a proceeding as to put it in the results of voluntary private enterprise. The only genuine opposite to a go-as-you-please let-alone philosophy is a philosophy which studies specific social needs and evils with a view to constructing the special machinery for which they call.

So far I have avoided any contrast of the so-called progressive attitude with the so-called conservative attitude. I cannot maintain that reserve any longer. While, in general, the opposite of the progressive attitude is not so much conservatism

as it is disbelief in the possibility of constructive social engineering, the conservative mind is a large factor in propagating this disbelief. The hard and fast conservative is the man who cannot conceive that existing constitutions, institutions, and social arrangements are mechanisms for achieving social results. To him, *they* are the results; they are final. If he could once cure himself of this illusion, he would be willing to admit that they grew up at haphazard and cross-purposes, and mainly at periods quite unlike the present. Admitting this, he would be ready to conceive the possibility that they are as poor mechanisms for accomplishing needed social results as were the physical tools which preceded the mastery of nature by mind. He would then be free: not free just to get emotionally excited about something called progress in general, but to consider what improved social mechanisms or contrivances are demanded at the present day.

All this, you will say (and quite justly), is very general, very vague. Permit me, in concluding, to give a few illustrations suggested by the present international situation, which may make my conception a little less vague. A friend was in Japan at the time when the war broke out. He remarked to an acquaintance, who happened to be the United States consul in the town where he was, that he supposed he would have no difficulty in getting an American draft cashed. His friend replied: On the contrary; he himself had had to spend almost two days in getting even a government draft cashed. My friend proceeded to generalize from this incident. He said in effect that in commerce we are proceeding upon an international basis; commerce depends upon a system of international credit. But politically we are doing business upon the basis of ideas that were formed before the rise of modern commerce — upon the basis of isolated national sovereignty. The deadlock due to this conflict could not continue, he surmised; either we must internationalize our antiquated political machinery or we must make our commercial ideas and practices conform to our political.

Personally I agree with his account of the needed remedy; it makes little difference, however, for purposes of my illustration whether anyone else agrees or not. The situation is one which is real; and it calls for some kind of constructive social planning. Our existing human intercourse requires some kind of a mechanism which it has not got. We may drift along till the evil gets intolerable, and then take some accidental way out, or we may plan in advance.

Another similar illustration is the condition in which neutral countries find themselves at the present time. They are in the position of the public when there is a strike on the part of street-railway employees. The corporation and the employees fight it out between themselves and the public suffers and has nothing to say. Now it ought to be clear that, as against contending nations, the nations not at war have the superior right in every case — not by any merit of theirs, usually only by accident. But nevertheless in the existing situation they are the representatives of the normal interests of mankind, and so are in the right against even the contending party that with respect to other contenders is most nearly in the right. But if the present situation makes anything clear, it is that there is almost a total lack of any machinery by which the factors which continue to represent civilization may make their claims effective. We are quite right in prizing such beggarly elements of international law as exist; but it is evidence of the conservative or *laissez-faire* mind that we cling so desperately to the established tradition and wait for new laws to be struck out by the accident of clash and victory, instead of setting ourselves in deliberate consultation to institute the needed laws of the intercourse of nations.

The illustration may be made more specific. It was comparatively easy to unify the sentiment of the nation when previous international custom was violated by the sinking of the *Lusitania*. It would not be very difficult to inflame that sentiment, in the name of a combination of defense of national honor and defense

of international custom, to the point of war. But it is always defense, mind you; every war is *ipso facto* defensive on the part of everybody nowadays. And defense is always retrospective and conservative, even when most offensive. A proposition to call for a conference of nations which would formulate what their rights are henceforth to be, whatever they may have been in the past, would be a constructive use of intelligence. But it would hardly call forth at present the enthusiastic acclaim of the public and consequently makes no great appeal to the political authorities who are dependent upon the support of the populace.

One more illustration from the international situation. The relative failure of international socialism in the present crisis has been sufficiently noted, with grief by some, with ill-disguised glee by others. But the simple fact of the case is that at present workingmen have more to gain from their own national state in the way of legislative and administrative concessions than they have from some other state, or from any international organization. That they should make use of war to strengthen their claims for concessions from the only power which can make these concessions is but to be human. When the day dawns when the workingmen have more to gain in the way of justice from an international organization than from a purely national one, that day war will become an impossibility. But it is easier to try to do away with war by appeal to personal sentiment than it is to strive to institute even the first steps of any such organization — futile in comparison as the former method must prove.

I hope these remarks at least illustrate what is meant by the dependence of progress upon a foreseeing and contriving intelligence as well as what is meant by saying that it is a retail job. I can only point out the need, so far as they coincide in the further interests of peace with the interest of progress, of an international commerce commission; of an international tariff board; of an international board for colonies and one for the

supervision of relations with those backward races which have not as yet been benevolently, or otherwise, assimilated by the economically advanced peoples. Such things are not counsels of perfection. They are practical possibilities as soon as it is genuinely recognized that the guarantee of progress lies in the perfecting of social mechanisms corresponding to specific needs.

THE PLACE OF AGRICULTURE IN HIGHER EDUCATION¹

L. H. BAILEY

THE subject may be approached from one or both of two diverse points of view, — from the side of the general social welfare, and from the side of the technical content of a course for the higher education in agriculture. I am most interested at present in the former, although the effectiveness of any education by means of agriculture must depend on the soundness of its organization in any institution, the carefulness of its processes, and the enthusiasm of its execution.

We are gradually passing to higher levels and to broader views of life. Educational procedure is keeping step with this onward movement and is constantly readjusting itself to conditions. That is, to-day education is becoming a real part of life.

Education has not always been a real part of life. It has not related itself to the workaday affairs of men and women. It has not been a real vestibule to the activity and accomplishment of adulthood. In making these statements, I intend no disparagement of the educational policy and procedure of our former days. I am speaking from the point of view of the evolution of human institutions. Our older educational method made strong and staunch men, but it did not give us the technical knowledge that we needed to conquer a continent or a world and to make the best use of it. School and life have been at variance.

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Whatever may have been the theory, it has been the practice that education is the privilege of the special and advantaged classes, of those who have risen out of the general human mass, and who all too often have stood solidly on the backs of the subject peoples. This has necessarily been so; and yet during all these many centuries the common people in their own places in all the ways and byways of the world have been calling bitterly for help.

It seems to be a temper of the human mind to desire those things and to endeavor to reach those states that lie far beyond the common life of the common day. We set our affections on things remote. We have desired to be translated, even from the days when the followers of Dionysus projected themselves into other states until the present time; and yet we live in a real world of actualities and of common things. If we are to make this real world mean very much to us we must put ourselves in vibration with it and be prepared to receive the most from it; and if we are to effectualize the lives of others, we must open their minds to the meaning of the common world in which they live. Even if we are thinking chiefly of the world to come, we really cannot prepare ourselves effectively for it without becoming a real and willing part of the very conditions in which we live.

The world is gradually coming to this point of view. We have practically left the old definition of "culture" as the end-all and be-all. We are now educating our people for efficiency and capability. We are escaping our bonds. We are rising beyond the narrowness and poverty of old educational systems.

We shall not lose the old. If the old will no longer constitute the whole, it will still contribute its part in the development of the race, and I think in its redirected forms will be absolutely more important than it has ever been in the past. We are escaping educational manners and attitudes, and, however we define it, we really believe that an educated man is not determined by the particular route through which he has come, but

by the perfectness to which he has developed in breadth of view, clear reasoning, good judgment, tolerance, high ideals, sensitiveness to art and nature, devotion to service.

In the past fifty years or more we have been adding to college courses one subject after another. Our educational structure has been growing by the process of accretion. We have added medicine, engineering, mechanics, and other professions, but at last we have introduced a leaven into the very center of the lump. This ferment is education by means of agriculture.

Most of our special and technical college education aims to develop the professional and occupational side of the man in order that he himself may receive more reward for his effort and reach a higher place amongst his fellows. It is concerned only secondarily and often remotely with the man or woman who actually performs the ultimate labor. In agriculture, however, the case is quite different, because the man on the farm is the one who himself performs the labor or is immediately responsible for it. The whole purpose of agriculture-education, if it is true to its opportunity, is to reach the last man in the terms of his daily life. This is why our leading colleges of agriculture are so vitalized with the social spirit. Here is an educational process that attempts to reach the real fundamental strata and the broad human levels. It cares less about professionalism and occupationalism than it does about the development of all the folk who live on the land, to the end that a new rural civilization may be produced. Education by means of agriculture, therefore, is not merely to add one more thing to our educational institutions: it is to remake much of our education. In this great result it will be seconded in a very effective way by the complementary movement to educate workers in all other industrial fields.

All this may sound like the vagary of a specialist, but I am willing to wait the issue. The movement will develop not only the individual but will relate him to his responsibility to the welfare of the outermost man and woman. It is dominated

and directed by the idea of rendering service. It takes hold of the real problems of the people in the places where the people live.

This education by means of agriculture, which has been slowly formulating and finding itself for a century, has now become visible, and in my opinion it is the most important single contemporaneous contribution to the method and outlook of education in general. You will find it redirecting our educational thought in the time just ahead of us.

In respect to its technical method, education by means of agriculture introduces observation and discussion of objects, phenomena and affairs as they actually exist in their own places. It takes the student to the field, the farm, the forest, the stable, the dairy, the harvest, the market. It is simple, direct, and devoid of too much pedagogical theory and indecision. It endeavors to make the common things of life worth while; and we know that as soon as these things are worth while, the most important step in their improvement has already begun.

Of course it goes without saying that the effectiveness of agriculture as a means of training depends on the way in which it is conducted in any particular case. We may expect to find loose, inadequate, and ineffective teaching of agriculture as of other subjects, and even more so, because the subject is new and the educational methods are not yet well worked out. It is possible to make a course in agriculture in the high school and the college just as definite, organic, and sound as a course in chemistry, physics, Latin, calculus, or civics. Until this is accomplished we cannot expect the best results from the work, but this realization is coming more rapidly than many of us are aware.

The experiences of the leading colleges of agriculture illustrate distinctly what may be accomplished with these subjects. The old department of "agriculture" in the institution is now broken into concrete lines or subjects that demand the most definite and painstaking work, and that call for the exercise of

great diversity of powers on the part of the student. I may mention, for example, such subjects as chemistry in its many relations with agriculture; animal husbandry, meat and milk production, stock-judging, nutrition and principles of feeding; entomology and other phases of biology; dairy industry, with milk tests, butter-making, cheese-making, dairy mechanics, bacteriology and the like; pomology, floriculture, greenhouse construction, market-gardening, and so on; the breeding of plants and animals; meteorology; studies of soils in their physical, chemical, and biological relations, soil surveys and charting; plant physiology in its relation to the growing of crops; plant and animal diseases; poultry husbandry in many phases; bee-keeping; home economics in its rural relation, including food, sanitation, nutrition, house-planning, household art and management, and the like; rural economy with historical, social, and economic relations; rural architecture; rural art and landscape gardening; forestry; rural normal work of many kinds; and other subjects. From this great body of subjects and problems it is possible to develop college and postgraduate courses of instruction that are as concrete, thorough, and scientific as those in other departments of human knowledge. From this field, also, general colleges and universities will be able to choose excellent subjects for the curriculum. Of course all such instruction, if it leads to regular college honors, must rest on fundamental work in English, physics, chemistry, geology, biology, drawing, and the like.

It is not contended by anybody that we have yet attained to perfection in the organization and study of any of these subjects, but progress is making rapidly, and we have now reached the point at which we are certain that this group of subjects may be made effective means of training men and women for the work of life, whether they are to be actual farmers or not.

The effectiveness of any study depends more on the way in which it is organized and taught than on the particular subject-matter itself. That is to say, if one person were to teach both

Greek and farm crops, and were equally prepared in the subject-matter of both, he probably would give as sound an educational course in one as in the other.

I hope that we are now fairly away from the idea that the value of a subject as training, or as a worthy object of pursuit, is in proportion to its remoteness from the affairs of life. I do not like the classification of certain subjects as "pure science," with its implication of certain other subjects as "impure science." All science is science, and all intellectual effort is intellectual effort, whether it has immediate application or whether it does not. Its effectiveness as a means of mental training does not depend on its utility or nonutility, although great difference may result in the outlook of the student and in his usefulness to the world from the pursuit of one phase or the other. I want to have equal recognition for all thorough and conscientious study, whether by teachers or students, in whatever field of knowledge or endeavor they may be expending themselves. We need carefully to guard the method of our instruction to the end that nothing may be thrown together, or be sensational or superficial or exploitational. I want particularly in the agricultural work to be sure that those who are fitted in the colleges to teach agriculture in the schools and other institutions shall be thoroughly well grounded in their science and in their philosophy, so that the work for which they may be responsible shall be of equal grade and intensity with any other work.

Now that education by means of agriculture is coming to be popular, all kinds of plans are being tried or discussed. Persons do not seem to realize that we have had about one hundred years of experience in the United States in agricultural education, and that this experience ought to point the way to success, or at least to the avoiding of serious errors. The agricultural colleges have come up through a long and difficult route, and their present success is not accidental, nor is it easy to duplicate or imitate. First and last about every conceivable plan has been tried by them, or by others in their time or preceding them;

and this experience ought to be utilized by the institutions that are now being projected in all parts of the country.

To teach agriculture merely by giving a new direction or vocabulary to botany, chemistry, geology, physics, and the like is not to teach agriculture at all, although it may greatly improve these subjects themselves. To put a college department of agriculture in the hands of some good science teacher in a general faculty with the idea that he can cover the agricultural work and at the same time keep up his own department is wholly ineffective (except temporarily) and out of character with the demands of the twentieth century. To suppose that "agriculture" is merely one subject for a college course, to be sufficiently represented by a "chair," is to miss the point of modern progress. To give only laboratory and recitation courses may be much better than nothing, but land teaching, either as a part of the institution itself or on adjacent farms, must be incorporated with the customary formal work if the best results are to be secured. To make a school farm pay for itself and for a regular school at the same time is impossible, unless the school is a very poor one; and yet this old fallacy is alive at the present day. To have a distant farm to visit and to look at, in order to "apply" the "teachings" of chemistry, botany, and the like, falls far short of real agricultural instruction. To develop a "model farm" that shall be a pattern to the multitude in exact farming is an exploded notion; that there are many farmers' farms that are better adapted to such purpose (the demonstration farm is the modern adaptation of the idea, and it is educationally sound) is a well known fact.

To teach agriculture of college grade requires not only persons who know the subject, but an organization well informed on the educational administration that is needed. There must be a body of experience in this line of work behind any teaching of a college and postgraduate plane that shall be really useful; when this body of experience does not exist, the work must necessarily grow slowly and be under the most expert direction.

The presumption is still against successful agriculture work in literary institutions, because such teaching demands a point of view on education that the persons in these institutions are likely not to possess. Agriculture cannot be introduced in the same way that a department or chair of history or mathematics can be organized; it requires a different outlook on educational procedure, a different order of equipment and of activities, and its own type of administration.

I am glad of all efforts to place agriculture in liberal arts institutions, when the effort is carefully founded. Regular college instruction in the subject will be demanded of them.¹ Such instruction ought to be of great value to the liberal arts institution as well as of service to society in general. The greater the number of institutions that are attacking the country life problem effectively the more comprehensive will be the redirection and betterment of rural affairs; but no institution can expect to contribute more to the movement unless it comes at the subject with a strong sense of its responsibilities, and a desire to draw heavily on the experience that has now accumulated in this kind of education.

The movement for agricultural education is well under way. It will grow greatly. It will take its place with other phases of the higher education. Its standing at any place or time will be determined not by the kinds of subjects that it handles, but by the integrity of the work.

¹ In this paper I am asked to speak of the place of agriculture in the higher education, and I take this to mean in regular college and postgraduate courses. Therefore I am not now considering short courses, propaganda, and other useful extension means by which institutions may reach and help the persons on the land.

ON GENERAL AND PROFESSIONAL EDUCATION¹

JOHN CAIRD

I HAVE more than once on similar occasions adverted to a problem which is one of the most important, as it is one of the most difficult, in the science of education — namely, how to limit the range of study without producing intellectual narrowness — how to contract the field of thought without contracting the mind of the thinker. Limitation in the first sense we must have, if only from the vast and ever-increasing extent of the field of knowledge, and the more and more definite specialization of its various departments. Selection on the art of the individual student is inevitable, and the plausible solution which occurs to many minds is that, seeing he cannot attempt to know everything, he should be guided in what he selects or omits by his individual aptitudes and by that which those aptitudes should determine — the special calling or career in life to which he is destined.

The time has been when the notion of universal knowledge, the attempt to gain something more than a superficial acquaintance with all the various departments of human thought, was not so absurd as now it seems to be. When books were few and life more leisurely, when the vast domain of physical science had scarcely begun to be explored, and even its principles and methods were not understood; when the sciences of philology and of historical criticism were yet in their infancy; when political economy, sociology, and kindred sciences had not yet begun to be, it was possible, at least for some minds, to grapple not unsuccessfully with almost all the main subjects of human thought, and to become conversant with every important work

¹ An address delivered at the University of Glasgow on April 13, 1897.

in the whole range of literature. But we have fallen on other and different times. In our day it is impossible, not merely for the average student, but for even those of the greatest ability and application, to advance far in the work of acquiring knowledge without discovering that limitation and condensation are the conditions of success. Encyclopedic knowledge can now be only another name for shallowness and superficiality. To attain the highest proficiency in any one branch of literature or science — or a fairly accurate acquaintance with two or three — the most ambitious student must be content to be comparatively ignorant of everything else, and to look on whole departments of thought and research as for him practically proscribed. To a certain extent we must all be either specialists or amateurs; we must make our choice between real and accurate, but limited, knowledge and mere dilettantism.

Since, then, limitation is inevitable, on what principle shall we proceed in determining what is to be excluded and what retained? The answer which to many seems to be beyond dispute is that the direction and limitation of our studies should from the very outset be determined by the use we are to make of them in our future life. If we cannot learn everything, should we not, in what we do learn, have regard mainly, if not exclusively, to the account to which our acquirements can be turned in the particular calling or profession to which we are destined? For most of us the exigencies of life are too pressing, the period of education too brief, to indulge in high-flown schemes of general culture. The result aimed at in our case cannot be merely to weave out of the raw material of mind the best possible specimen of educated intelligence that can be extracted from it, but to produce what would yield robust service in a particular line of work, make us capable men of business, clever, well-informed, and successful lawyers, doctors, divines. And this principle, it would be said, is becoming more and more recognized in our scheme of University education, in which not only do professional studies occupy a large and in-

creasing space, but by the introduction of new subjects into the nonprofessional or arts curriculum, a wider option in accordance with individual aptitudes and the future vocation of the student has been introduced.

But though there is no doubt a measure of truth in this popular and common-sense solution of the problem, there are one or two things to be considered before we adopt it as a complete and adequate solution. Education cannot be mainly guided by professional aims, because, in the first place, education is needed to guide us in the selection of a profession, to enable us to know what our special calling or profession is; in the second place, to protect us against the narrowing influence of all, even the so-called liberal professions; and, in the third place, to fit us for important social duties which lie outside of every man's professional work.

A man's education cannot be determined altogether by regard to his future calling, seeing that it is one end of a good education to enable a man to find out what his true vocation is. Though it is often determined by accident, the selection of one's calling in life is at once one of the most important and one of the most difficult decisions which a man can form. Perhaps the fair portion of my auditory will forgive me for saying that it is a choice as critical as that which determines a certain very close relationship in life; and I do not know whether it is not often made with as little reflection in the one case as in the other, and whether the consequences of a wrong choice are not as fatal and sometimes as irremediable.

Our usefulness, success, and happiness in life depend unquestionably not a little on the measure in which we are in harmony with our place and work in the world. How then, the question arises, shall we find out what that place and work is? For one thing this, I think it will be obvious, is a question the right answer to which implies a measure of judgment, forethought, reflection, and a range of information and intellectual experience such as presuppose and are the best results of a liberal education.

We do not come into the world each ticketed off by any outward mark for our special destination. There may perhaps be some minds of such marked individuality as to betray at a very early period of life, there may be even infant prodigies, in whom the future poet or artist, the coming orator or statesman, can be discerned ere he has well left the nursery; but I fear that such forecastings are in general due only to partial or parental observations, or to the biographer's tendency to read back the success of subsequent life into the incidents of childhood. To an impartial observer, so far as mental characteristics go, all babies are very much alike. The inarticulate vocal manifestations of the future poet or musician are no more melodious than those of his tuneless brother. The incipient divine or philosopher does not foreshadow his career in a premature air of thoughtful gravity impressed on his countenance. Even when we come to the stage at which education begins — a few rare instances of precocity excepted — individual aptitude is only very slightly discernible. It is not till a later, in the case of some of the best minds a much later period — viz., when the schoolboy stage is past, and that of student life has considerably advanced — that a youth can be said to be possessed of the materials by which the choice of a career can be wisely determined; in other words, of that knowledge of the various branches of human thought, and that experimental knowledge of himself and of the direction and limits of his powers, by which he becomes capable of such a decision as to his future destiny.

And so in the process of education there is room for an intermediate or transition stage between schoolboy discipline and strictly professional culture. There are many minds in which the intellectual instincts and aptitudes are slow to betray themselves; and whether the latent genius be for letters or art or science or the industrial arts or practical life or politics, it has been only after the rugged propædæutic of school discipline has long been left behind and the wonder and delight of the world

of thought has become a growing experience, and the free play of their powers under the discipline of a general, many-sided culture has begun to be felt that they have come to discern where in the wide field of human activity lies their special vocation.

Another reason, I have said, why in education we should not have regard exclusively or mainly to the student's future calling or profession is that it is one great aim of education to protect us from the narrowing influence of all, even of the so-called liberal, professions. I must pass by this point, however, with only a single remark. The division of labor, as has often been pointed out, is subject to this drawback, that it tends to sacrifice the full development of the individual to the exigencies of society. Professional or technical excellence would seem to be incompatible with symmetry and width of culture. It often leads not merely to imperfect but also to unequal or one-sided development. This is most obvious in the case of manual or mechanical callings. Each trade or craft exercises constantly one member or faculty or class of faculties, leaving the others comparatively inactive — runs the whole physical energy into one limb or organ, and so distends it to exaggerated dimensions, whilst the others are proportionately dwarfed or enfeebled.

And the same is in a measure true of intellectual work. It is the tendency of the various professions to call into play a limited class of mental activities, to dam up the spiritual force that is in a man into a particular channel, and so leave the non-professional regions of his nature comparatively dry and barren. Not only are most men apt to form an exaggerated estimate of the importance of that which is their daily occupation, but they get the stamp of the shop impressed upon them, and carry their technical views and principles of judgment about with them wherever they go. There are many men one meets in society whose only alternative is to be technical or dull, to be dumb or learnedly loquacious. The narrowing tendency in question shows itself by engendering in the mind a host of class prejudices,

by indispensing it for wide, impartial, tolerant views; by depriving it of flexibility and the capacity to look at things from the point of view of other minds and the wider one of reason itself; finally, by breeding in us a professional selfishness—a tendency to view all measures and plans of improvement, not by the bearing on the general welfare, but on the interests of a class, so that the first question is not — Is this opinion true, is this political or ecclesiastical reform just, will it redress some crying wrong, hinder or help the national weal? but — Will it promote or hinder the dignity, power, and wealth of the order to which I belong? Is our craft in danger and the shrine of the great goddess Diana, whom all Asia and the world worship?

I shall not prosecute this part of our subject any further; but enough, I think, has been said to show the importance of a general, as distinguished from a special and professional training. As the pettiness of mind incident to life in a small circle is best corrected by foreign travel, so the remedy for intellectual narrowness is to be free in the wide world of thought. Converse with many cities and men disabuses the mind of the parochial standard of judgment. So the best cure for intellectual narrowness is the capacity to escape from the confined atmosphere of class or craft into the wide domain of letters, of science, of philosophy, of art. The physician or lawyer who is a classical scholar, or at any rate conversant with the treasures of either ancient or modern literature, capable of finding purest enjoyment over the pages of its poets, historians, philosophers, is not likely to sink into a professional hack. The divine who is also a man of scientific or scholarly tastes is at least not likely to settle into the vulgar zealot, absorbing his soul in the petty politics of a sect or regarding its standards of orthodoxy as pillars round which the universe revolves. Be it yours, in this ancient home of learning, to seek after that preservative from narrowness which its studies afford.

One of the most precious characteristics of such institutions as this is what I may venture to designate the unworldliness of

the spirit which pervades them. It is surely no little gain for society that at the impressible stage of transition between boyhood and manhood young men should be made to breathe for a term of years an intellectual atmosphere other and purer than that which but too often pervades the world which they are about to enter — that they should for a time be members of a society in which the scramble for material gain, the fierce and often vulgarizing competition for worldly preferment, are as yet things unknown. To say this implies no high-flown, sentimental disparagement of the aims and ambitions that play so large a part in the world, and lend movement, activity, and interest to the drama of life. But it is not to the love of money or the love of social advancement, or even mainly to the love of honor and reputation, that we here appeal. There is a passion purer, loftier, and, in those who are capable of its inspiration, more intense than any of these — the love of truth, the passion for knowledge and intellectual attainment for its own sake; and it is our glory and boast that it is this which constitutes the distinctive characteristic, the very breath and life of such places as this.

Poor and vain would be the result of years you have passed in this place of study if, beyond the hope of future success in the world, beyond all ulterior aims and ambitions, there has not been awakened in you some breath of the genuine student's ardor, some sense of the worth and joy of intellectual effort for its own sake. On the other hand, if you have learned here, apart from the use of your studies as a preparation for your work in the world, to know with appreciative sympathy something of what the world's greatest minds have thought or its sweetest poets have sung, or of what in ancient or modern times its greatest workers have done for the progress of the race; or if there has been put into your hands the key by which science unlocks the secrets of nature, so that a treasure of mental resource will all through your future life be open to you; still more, if you have gained or begun to gain here the precious

possession of disciplined faculties, of a trained intelligence, strength of judgment, refinement of taste, and habits of application and self-command, — then, be your future career what it may — obscure, unrewarded, unknown to fame, or brilliant and successful as the most sanguine imagination can picture it — not in vain for you will these eventful years have passed. For you will have got from them that which in all the future will furnish you with an escape from the pettiness and narrowness, the vulgarizing and wearing anxieties that beset most of us amidst our daily work; that will provide you with new uses for wealth and property if they come to you, and, on the other hand, next to religion, will prove the truest consolation of adversity and disappointment, of worldly care and sorrow.

SCIENCE AND CULTURE¹

THOMAS HENRY HUXLEY

FROM the time that the first suggestion to introduce physical science into ordinary education was timidly whispered, until now, the advocates of scientific education have met with opposition of two kinds. On the one hand, they have been pooh-poohed by the men of business who pride themselves on being the representatives of practicality; while, on the other hand, they have been excommunicated by the classical scholars, in their capacity of Levites in charge of the ark of culture² and monopolists of liberal education.

The practical men believed that the idol whom they worship — rule of thumb — has been the source of the past prosperity, and will suffice for the future welfare of the arts and manufactures. They were of opinion that science is speculative rubbish; that theory and practice have nothing to do with one another; and that the scientific habit of mind is an impediment, rather than an aid, in the conduct of ordinary affairs.

I have used the past tense in speaking of the practical men — for although they were very formidable thirty years ago, I am not sure that the pure species has not been extirpated. In fact, so far as mere argument goes, they have been subjected to such a *feu d'enfer* that it is a miracle if any have escaped. But I have remarked that your typical practical man has an unexpected resemblance to one of Milton's angels. His spiritual wounds, such as are inflicted by logical weapons, may be as deep as a

¹ An address delivered at the opening of Sir Josiah Mason's Science College at Birmingham, October 1, 1880. It is reprinted from *Science and Education*.

² See *Numbers*, iii, 14-32.

well and as wide as a church door, but beyond shedding a few drops of ichor, celestial or otherwise, he is no whit the worse.¹ So, if any of these opponents be left, I will not waste time in vain repetition of the demonstrative evidence of the practical value of science; but knowing that a parable will sometimes penetrate where syllogisms fail to effect an entrance, I will offer a story for their consideration.

Once upon a time, a boy with nothing to depend upon but his own vigorous nature was thrown into the thick of the struggle for existence in the midst of a great manufacturing population.² He seems to have had a hard fight, inasmuch as, by the time he was thirty years of age, his total disposable funds amounted to twenty pounds. Nevertheless, middle life found him giving proof of his comprehension of the practical problems he had been roughly called upon to solve, by a career of remarkable prosperity.

Finally, having reached old age with its well-earned surroundings of "honor, troops of friends,"³ the hero of my story be-thought himself of those who were making a like start in life, and how he could stretch out a helping hand to them.

After long and anxious reflection this successful practical man of business could devise nothing better than to provide them with the means of obtaining "sound, extensive, and practical scientific knowledge."⁴ And he devoted a large part of his wealth and five years of incessant work to this end.

I need not point the moral of a tale which, as the solid and spacious fabric of the Scientific College assures us, is no fable, nor can anything which I could say intensify the force of this practical answer to practical objections.

¹ See Milton's *Paradise Lost*, Bk. vi, ll. 327, ff.

² The man whose career Huxley is tracing was Sir Josiah Mason (1795-1881), pen maker and general manufacturer, who founded the Scientific College at Birmingham.

³ See *Macbeth*, v, 3, 25.

⁴ Evidently Huxley is here quoting the words of Sir Josiah Mason.

We may take it for granted, then, that, in the opinion of those best qualified to judge, the diffusion of thorough scientific education is an absolutely essential condition of industrial progress; and that the College which has been opened to-day will confer an inestimable boon upon those whose livelihood is to be gained by the practice of the arts and manufactures of the district.

The only question worth discussion is, whether the conditions under which the work of the College is to be carried out are such as to give it the best possible chance of achieving permanent success.

Sir Josiah Mason, without doubt most wisely, has left very large freedom of action to the trustees, to whom he proposes ultimately to commit the administration of the College, so that they may be able to adjust its arrangements in accordance with the changing conditions of the future. But, with respect to three points, he has laid most explicit injunctions upon both administrators and teachers.

Party politics are forbidden to enter into the minds of either, so far as the work of the College is concerned; theology is as sternly banished from its precincts; and finally, it is especially declared that the College shall make no provision for "mere literary instruction and education."

It does not concern me at present to dwell upon the first two injunctions any longer than may be needful to express my full conviction of their wisdom. But the third prohibition brings us face to face with those other opponents of scientific education, who are by no means in the moribund condition of the practical man, but alive, alert, and formidable.

It is not impossible that we shall hear this express exclusion of "literary instruction and education" from a College which, nevertheless, professes to give a high and efficient education, sharply criticized. Certainly the time was that the Levites of culture would have sounded their trumpets against its walls as against an educational Jericho.

How often have we not been told that the study of physical science is incompetent to confer culture; that it touches none of the higher problems of life; and, what is worse, that the continual devotion to scientific studies tends to generate a narrow and bigoted belief in the applicability of scientific methods to the search after truth of all kinds? How frequently one has reason to observe that no reply to a troublesome argument tells so well as calling its author a "mere scientific specialist." And, as I am afraid it is not permissible to speak of this form of opposition to scientific education in the past tense, may we not expect to be told that this, not only omission, but prohibition, of "mere literary instruction and education" is a patent example of scientific narrow-mindedness?

I am not acquainted with Sir Josiah Mason's reasons for the action which he has taken; but if, as I apprehend is the case, he refers to the ordinary classical course of our schools and universities by the name of "mere literary instruction and education," I venture to offer sundry reasons of my own in support of that action.

For I hold very strongly by two convictions — The first is, that neither the discipline nor the subject-matter of classical education is of such direct value to the student of physical science as to justify the expenditure of valuable time upon either; and the second is, that for the purpose of attaining real culture, an exclusively scientific education is at least as effectual as an exclusively literary education.

I need hardly point out to you that these opinions, especially the latter, are diametrically opposed to those of the great majority of educated Englishmen, influenced as they are by school and university traditions. In their belief, culture is obtainable only by a liberal education; and a liberal education is synonymous, not merely with education and instruction in literature, but in one particular form of literature, namely, that of Greek and Roman antiquity. They hold that the man who has learned Latin and Greek, however little, is educated; while

he who is versed in other branches of knowledge, however deeply, is a more or less respectable specialist, not admissible into the cultured caste. The stamp of the educated man, the University degree, is not for him.

I am too well acquainted with the generous catholicity of spirit, the true sympathy with scientific thought, which pervades the writings of our chief apostle of culture to identify him with these opinions; and yet one may cull from one and another of these epistles to the Philistines, which so much delight all who do not answer to that name, sentences which lend them some support.

Mr. Arnold tells us that the meaning of culture is "to know the best that has been thought and said in the world." It is the criticism of life contained in literature. That criticism regards "Europe as being, for intellectual and spiritual purposes, one great confederation, bound to a joint action and working to a common result; and whose members have, for their common outfit, a knowledge of Greek, Roman, and Eastern antiquity, and of one another. Special, local, and temporary advantages being put out of account, that modern nation will in the intellectual and spiritual sphere make most progress which most thoroughly carries out this program. And what is that but saying that we too, all of us, as individuals, the more thoroughly we carry it out, shall make the more progress?"¹

We have here to deal with two distinct propositions: the first, that a criticism of life is the essence of culture; the second, that literature contains the materials which suffice for the construction of such a criticism.

I think that we must all assent to the first proposition. For culture certainly means something quite different from learning or technical skill. It implies the possession of an ideal, and the habit of critically estimating the value of things by comparison with a theoretic standard. Perfect culture should supply a complete theory of life, based upon a clear knowledge alike of its possibilities and of its limitations.

¹ Huxley, *Essays in Criticism*, p. 37.

But we may agree to all this, and yet strongly dissent from the assumption that literature alone is competent to supply this knowledge. After having learnt all that Greek, Roman, and Eastern antiquity have thought and said, and all that modern literatures have to tell us, it is not self-evident that we have laid a sufficiently broad and deep foundation for that criticism of life which constitutes culture.

Indeed, to anyone acquainted with the scope of physical science, it is not at all evident. Considering progress only in the "intellectual and spiritual sphere," I find myself wholly unable to admit that either nations or individuals will really advance, if their common outfit draws nothing from the stores of physical science. I should say that an army, without weapons of precision and with no particular base of operations, might more hopefully enter upon a campaign on the Rhine, than a man, devoid of a knowledge of what physical science has done in the last century, upon a criticism of life.

When a biologist meets with an anomaly, he instinctively turns to the study of development to clear it up. The rationale of contradictory opinions may with equal confidence be sought in history.

It is, happily, no new thing that Englishmen should employ their wealth in building and endowing institutions for educational purposes. But, five or six hundred years ago, deeds of foundation expressed or implied conditions as nearly as possible contrary to those which have been thought expedient by Sir Josiah Mason. That is to say, physical science was practically ignored, while a certain literary training was enjoined as a means to the acquirement of knowledge which was essentially theological.

The reason of this singular contradiction between the actions of men alike animated by a strong and disinterested desire to promote the welfare of their fellows is easily discovered.

At that time, in fact, if anyone desired knowledge beyond such as could be obtained by his own observation, or by

common conversation, his first necessity was to learn the Latin language, inasmuch as all the higher knowledge of the western world was contained in works written in that language. Hence, Latin grammar, with logic and rhetoric, studied through Latin, were the fundamentals of education. With respect to the substance of the knowledge imparted through this channel, the Jewish and Christian Scriptures, as interpreted and supplemented by the Romish Church, were held to contain a complete and infallibly true body of information.

Theological dicta were, to the thinkers of those days, that which the axioms and definitions of Euclid are to the geometers of these. The business of the philosophers of the Middle Ages was to deduce from the data furnished by the theologians conclusions in accordance with ecclesiastical decrees. They were allowed the high privilege of showing, by logical process, how and why that which the Church said was true, must be true. And if their demonstrations fell short of or exceeded this limit, the Church was maternally ready to check their aberrations, if need were by the help of the secular arm.

Between the two, our ancestors were furnished with a compact and complete criticism of life. They were told how the world began and how it would end; they learned that all material existence was but a base and insignificant blot upon the fair face of the spiritual world, and that nature was, to all intent and purposes, the playground of the devil; they learned that the earth is the center of the visible universe, and that man is the cynosure of things terrestrial; and more especially was it inculcated that the course of nature had no fixed order, but that it could be, and constantly was, altered by the agency of innumerable spiritual beings, good and bad, according as they were moved by the deeds and prayers of men. The sum and substance of the whole doctrine was to produce the conviction that the only thing really worth knowing in this world was how to secure that place in a better which, under certain conditions, the Church promised.

Our ancestors had a living belief in this theory of life, and acted upon it in their dealings with education, as in all other matters. Culture meant saintliness — after the fashion of the saints of those days; the education that led to it was, of necessity, theological; and the way to theology lay through Latin.

That the study of nature — further than was requisite for the satisfaction of everyday wants — should have any bearing on human life was far from the thoughts of men thus trained. Indeed, as nature had been cursed for man's sake, it was an obvious conclusion that those who meddled with nature were likely to come into pretty close contact with Satan. And, if any born scientific investigator followed his instincts, he might safely reckon upon earning the reputation, and probably upon suffering the fate, of a sorcerer.

Had the western world been left to itself in Chinese isolation, there is no saying how long this state of things might have endured. But, happily, it was not left to itself. Even earlier than the thirteenth century, the development of Moorish civilization in Spain and the great movement of the Crusades had introduced the leaven which, from that day to this, has never ceased to work. At first, through the intermediation of Arabic translations, afterwards by the study of the originals, the western nations of Europe became acquainted with the writings of the ancient philosophers and poets, and, in time, with the whole of the vast literature of antiquity.

Whatever there was of high intellectual aspiration or dominant capacity in Italy, France, Germany, and England spent itself for centuries in taking possession of the rich inheritance left by the dead civilizations of Greece and Rome. Marvelously aided by the invention of printing, classical learning spread and flourished. Those who possessed it prided themselves on having attained the highest culture then within the reach of mankind.

And justly. For, saving Dante on his solitary pinnacle, there was no figure in modern literature at the time of the

Renascence to compare with the men of antiquity; there was no art to compete with their sculpture; there was no physical science but that which Greece had created. Above all, there was no other example of perfect intellectual freedom — of the unhesitating acceptance of reason as the sole guide to truth and the supreme arbiter of conduct.

The new learning necessarily soon exerted a profound influence upon education. The language of the monks and schoolmen seemed little better than gibberish to scholars fresh from Virgil and Cicero, and the study of Latin was placed upon a new foundation. Moreover, Latin itself ceased to afford the sole key to knowledge. The student who sought the highest thought of antiquity found only a second-hand reflection of it in Roman literature, and turned his face to the full light of the Greeks. And after a battle, not altogether dissimilar to that which is at present being fought over the teaching of physical science, the study of Greek was recognized as an essential element of all higher education.

Thus the Humanists, as they were called, won the day; and the great reform which they effected was of incalculable service to mankind. But the Nemesis of all reformers is finality; and the reformers of education, like those of religion, fell into the profound, however common, error of mistaking the beginning for the end of the work of reformation.

The representatives of the Humanists, in the nineteenth century, take their stand upon classical education as the sole avenue to culture, as firmly as if we were still in the age of the Renascence. Yet, surely, the present intellectual relations of the modern and the ancient worlds are profoundly different from those which obtained three centuries ago. Leaving aside the existence of a great and characteristically modern literature, of modern painting, and, especially, of modern music, there is one feature of the present state of the civilized world which separates it more widely from the Renascence, than the Renascence was separated from the Middle Ages.

This distinctive character of our own times lies in the vast and constantly increasing part which is played by natural knowledge. Not only is our daily life shaped by it, not only does the prosperity of millions of men depend upon it, but our whole theory of life has long been influenced, consciously or unconsciously, by the general conceptions of the universe which have been forced upon us by physical science.

In fact, the most elementary acquaintance with the results of scientific investigation shows us that they offer a broad and striking contradiction to the opinion so implicitly credited and taught in the Middle Ages.

The notions of the beginning and the end of the world entertained by our forefathers are no longer credible. It is very certain that the earth is not the chief body in the material universe, and that the world is not subordinated to man's use. It is even more certain that nature is the expression of a definite order with which nothing interferes, and that the chief business of mankind is to learn that order and govern themselves accordingly. Moreover, this scientific "criticism of life" presents itself to us with different credentials from any other. It appeals not to authority, nor to what anybody may have thought or said, but to nature. It admits that all our interpretations of natural fact are more or less imperfect and symbolic, and bids the learner seek for truth not among words but among things. It warns us that the assertion which outstrips evidence is not only a blunder but a crime.

The purely classical education advocated by the representatives of the Humanists in our day gives no inkling of all this. A man may be a better scholar than Erasmus,¹ and know no more of the chief causes of the present intellectual fermentation than Erasmus did. Scholarly and pious persons, worthy of all respect, favor us with allocutions upon the sadness of the antagonism of science to their mediæval way of thinking, which

¹ Desiderius Erasmus (1466?-1536), philosopher, man of letters and Biblical scholar, perhaps the greatest of the Humanists of the Renaissance.

betray an ignorance of the first principles of scientific investigation, an incapacity for understanding what a man of science means by veracity, and an unconsciousness of the weight of established scientific truths, which is almost comical.

There is no great force in the *tu quoque* argument, or else the advocates of scientific education might fairly enough retort upon the modern Humanists that they may be learned specialists, but that they possess no such sound foundation for a criticism of life as deserves the name of culture. And, indeed, if we were disposed to be cruel, we might urge that the Humanists have brought this reproach upon themselves, not because they are too full of the spirit of the ancient Greek, but because they lack it.

The period of the Renaissance is commonly called that of the "Revival of Letters," as if the influences then brought to bear upon the mind of Western Europe had been wholly exhausted in the field of literature. I think it is very commonly forgotten that the revival of science, effected by the same agency, although less conspicuous, was not less momentous.

In fact, the few and scattered students of nature of that day picked up the clew to her secrets exactly as it fell from the hands of the Greeks a thousand years before. The foundations of mathematics were so well laid by them, that our children learn their geometry from a book written for the schools of Alexandria two thousand years ago.¹ Modern astronomy is the natural continuation and development of the work of Hipparchus and of Ptolemy; modern physics of that of Democritus and of Archimedes; it was long before modern biological science outgrew the knowledge bequeathed to us by Aristotle, by Theophrastus, and by Galen.

We cannot know all the best thoughts and saying of the Greeks unless we know that they thought about natural phenomena. We cannot fully apprehend their criticism of life

¹ Euclid's *Elements*. The work of the other Greek scientists and physicians mentioned is sufficiently indicated by Huxley's remarks.

unless we understand the extent to which that criticism was affected by scientific conceptions. We falsely pretend to be the inheritors of their culture, unless we are penetrated, as the best minds among them were, with an unhesitating faith that the free employment of reason, in accordance with scientific method, is the sole method of reaching truth.

Thus I venture to think that the pretensions of our modern Humanists to the possession of the monopoly of culture and to the exclusive inheritance of the spirit of antiquity must be abated, if not abandoned. But I should be very sorry that anything I have said should be taken to imply a desire on my part to depreciate the value of classical education, as it might be and as it sometimes is. The native capacities of mankind vary no less than their opportunities; and while culture is one, the road by which one man may best reach it is widely different from that which is most advantageous to another. Again, while scientific education is yet inchoate and tentative, classical education is thoroughly well organized upon the practical experience of generations of teachers. So that, given ample time for learning and destination for ordinary life, or for a literary career, I do not think that a young Englishman in search of culture can do better than follow the course usually marked out for him, supplementing its deficiencies by his own efforts.

But for those who mean to make science their serious occupation; or who intend to follow the profession of medicine; or who have to enter early upon the business of life; for all these, in my opinion, classical education is a mistake; and it is for this reason that I am glad to see "mere literary education and instruction" shut out from the curriculum of Sir Josiah Mason's College, seeing that its inclusion would probably lead to the introduction of the ordinary smattering of Latin and Greek.

Nevertheless, I am the last person to question the importance of genuine literary education, or to suppose that intellectual culture can be complete without it. An exclusively scientific training will bring about a mental twist as surely as an exclusively

literary training. The value of the cargo does not compensate for a ship's being out of trim; and I should be very sorry to think that the Scientific College would turn out none but lopsided men.

There is no need, however, that such a catastrophe should happen. Instruction in English, French, and German is provided, and thus the three greatest literatures of the modern world are made accessible to the student.

French and German, and especially the latter language, are absolutely indispensable to those who desire full knowledge in any department of science. But even supposing that the knowledge of these languages acquired is not more than sufficient for purely scientific purposes, every Englishman has, in his native tongue, an almost perfect instrument of literary expression; and, in his own literature, models of every kind of literary excellence. If an Englishman cannot get literary culture out of his Bible, his Shakespeare, his Milton, neither, in my belief, will the profoundest study of Homer and Sophocles, Virgil and Horace, give it to him.

Thus, since the constitution of the College makes sufficient provision for literary as well as for scientific education, and since artistic instruction is also contemplated, it seems to me that a fairly complete culture is offered to all who are willing to take advantage of it.

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And, as to the desirableness of a wider culture than that yielded by science alone, it is to be recollected that the improvement of manufacturing processes is only one of the conditions which contribute to the prosperity of industry. Industry is a means and not an end; and mankind work only to get something which they want. What that something is depends partly on their innate, and partly on their acquired, desires.

If the wealth resulting from prosperous industry is to be spent upon the gratification of unworthy desires, if the increas-

ing perfection of manufacturing processes is to be accompanied by an increasing debasement of those who carry them on, I do not see the good of industry and prosperity.

Now it is perfectly true that men's views of what is desirable depend upon their characters; and that the innate proclivities to which we give that name are not touched by any amount of instruction. But it does not follow that even mere intellectual education may not, to an indefinite extent, modify the practical manifestation of the characters of men in their actions, by supplying them with motives unknown to the ignorant. A pleasure-loving character will have pleasure of some sort; but, if you give him the choice, he may prefer pleasures which do not degrade him to those which do. And this choice is offered to every man who possesses in literary or artistic culture a never-failing source of pleasures, which are neither withered by age, nor staled by custom, nor embittered in the recollection by the pangs of self-reproach.

SWEETNESS AND LIGHT¹

MATTHEW ARNOLD

THE disparagers of culture make its motive curiosity; sometimes, indeed, they make its motive mere exclusiveness and vanity. The culture which is supposed to plume itself on a smattering of Greek and Latin is a culture which is begotten by nothing so intellectual as curiosity; it is valued either out of sheer vanity and ignorance or else as an engine of social and class distinction, separating its holder, like a badge or title, from other people who have not got it. No serious man would call this *culture*, or attach any value to it, as culture, at all. To find the real ground for the very differing estimate which serious people will set upon culture, we must find some motive for culture in the terms of which may lie a real ambiguity; and such a motive the word *curiosity* gives us.

I have before now pointed out that we English do not, like the foreigners, use this word in a good sense as well as in a bad sense. With us the word is always used in a somewhat disapproving sense. A liberal and intelligent eagerness about the things of the mind may be meant by a foreigner when he speaks of curiosity, but with us the word always conveys a certain notion of frivolous and unedifying activity. In the *Quarterly Review*, some little time ago, was an estimate of the celebrated French critic, M. Sainte-Beuve, and a very inadequate estimate it in my judgment was. And its inadequacy consisted chiefly in

¹ *Sweetness and Light* was delivered as Arnold's last lecture in the chair of poetry at Oxford, and first appeared in the *Cornhill Magazine* for July, 1867, under the title *Culture and Its Enemies*. In 1869 it was published in book form as the opening chapter of the volume *Culture and Anarchy*.

this: that in our English way it left out of sight the double sense really involved in the word *curiosity*, thinking enough was said to stamp M. Sainte-Beuve with blame if it was said that he was impelled in his operations as a critic by curiosity, and omitting either to perceive that M. Sainte-Beuve himself, and many other people with him, would consider that this was praiseworthy and not blameworthy, or to point out why it ought really to be accounted worthy of blame and not of praise. For as there is a curiosity about intellectual matters which is futile, and merely a disease, so there is certainly a curiosity, — a desire after the things of the mind simply for their own sakes and for the pleasure of seeing them as they are, — which is, in an intelligent being, natural and laudable. Nay, and the very desire to see things as they are implies a balance and regulation of mind which is not often attained without fruitful effort, and which is the very opposite of the blind and diseased impulse of mind which is what we mean to blame when we blame curiosity. Montesquieu says: "The first motive which ought to impel us to study is the desire to augment the excellence of our nature, and to render an intelligent being yet more intelligent." This is the true ground to assign for the genuine scientific passion, however manifested, and for culture, viewed simply as a fruit of this passion; and it is a worthy ground, even though we let the term *curiosity* stand to describe it.

But there is of culture another view, in which not solely the scientific passion, the sheer desire to see things as they are, natural and proper in an intelligent being, appears as the ground of it. There is a view in which all the love of our neighbor, the impulses towards action, help, and beneficence, the desire for removing human error, clearing human confusion, and diminishing human misery, the noble aspiration to leave the world better and happier than we found it, — motives eminently such as are called social, — come in as part of the grounds of culture, and the main and preëminent part. Culture is then properly described not as having its origin in curiosity, but as having its

origin in the love of perfection; *it is a study of perfection*. It moves by the force, not merely or primarily of the scientific passion for pure knowledge but also of the moral and social passion for doing good. As, in the first view of it, we took for its worthy motto Montesquieu's words, "To render an intelligent being yet more intelligent," so, in the second view of it, there is no better motto which it can have than these words of Bishop Wilson: "To make reason and the will of God prevail!"

Only, whereas the passion for doing good is apt to be overhasty in determining what reason and the will of God say, because its turn is for acting rather than thinking and it wants to be beginning to act; and whereas it is apt to take its own conceptions, which proceed from its own state of development and share in all the imperfections and immaturities of this, for a basis of action; what distinguishes culture is, that it is possessed by the scientific passion as well as by the passion of doing good; that it demands worthy notions of reason and the will of God, and does not readily suffer its own crude conceptions to substitute themselves for them. And knowing that no action or institution can be salutary and stable which is not based on reason and the will of God, it is not so bent on acting and instituting, even with the great aim of diminishing human error and misery ever before its thoughts, but that it can remember that acting and instituting are of little use unless we know how and what we ought to act and to institute.

This culture is more interesting and more far-reaching than that other, which is founded solely on the scientific passion for knowing. But it needs times of faith and ardor, times when the intellectual horizon is opening and widening all round us, to flourish in. And is not the close and bounded intellectual horizon within which we have long lived and moved now lifting up, and are not new lights finding free passage to shine in upon us? For a long time there was no passage for them to make their way in upon us, and then it was of no use to think of

adapting the world's action to them. Where was the hope of making reason and the will of God prevail among people who had a routine which they had christened reason and the will of God, in which they were inextricably bound, and beyond which they had no power of looking? But now the iron force of adhesion to the old routine, — social, political, religious, — has wonderfully yielded; the iron force of exclusion of all which is new has wonderfully yielded. The danger now is, not that people should obstinately refuse to allow anything but their old routine to pass for reason and the will of God, but either that they should allow some novelty or other to pass for these too easily, or else that they should underrate the importance of them altogether, and think it enough to follow action for its own sake, without troubling themselves to make reason and the will of God prevail therein. Now, then, is the moment for culture to be of service, culture which believes in making reason and the will of God prevail, believes in perfection, is the study and pursuit of perfection, and is no longer debarred, by a rigid, invincible exclusion of whatever is new, from getting acceptance for its ideas, simply because they are new.

The moment this view of culture is seized, the moment it is regarded not solely as the endeavor to see things as they are, to draw towards a knowledge of the universal order which seems to be intended and aimed at in the world, and which it is a man's happiness to go along with or his misery to go counter to, — to learn, in short, the will of God, — the moment, I say, culture is considered not merely as the endeavor to *see* and *learn* this, but as the endeavor, also, to make it *prevail*, the moral, social, and beneficent character of culture becomes manifest. The mere endeavor to see and learn the truth for our own personal satisfaction is indeed a commencement for making it prevail, a preparing the way for this, which always serves this, and is wrongly, therefore, stamped with blame absolutely in itself and not only in its caricature and degeneration. But perhaps it has got stamped with blame, and disparaged with the dubious title of

curiosity, because in comparison with this wider endeavor of such great and plain utility it looks selfish, petty, and unprofitable.

And religion, the greatest and most important of the efforts by which the human race has manifested its impulse to perfect itself, — religion, that voice of the deepest human experience, — does not only enjoin and sanction the aim which is the great aim of culture, the aim of setting ourselves to ascertain what perfection is and to make it prevail; but also, in determining generally in what human perfection consists, religion comes to a conclusion identical with that which culture, — seeking the determination of this question through all the voices of human experience which have been heard upon it, of art, science, poetry, philosophy, history, as well as of religion, in order to give a greater fullness and certainty to its solution, — likewise reaches. Religion says: *The kingdom of God is within you*; and culture, in like manner, places human perfection in an *internal* condition, in the growth and predominance of our humanity proper, as distinguished from our animality. It places it in the ever increasing efficacy and in the general harmonious expansion of those gifts of thought and feeling which make the peculiar dignity, wealth, and happiness of human nature. As I have said on a former occasion: "It is in making endless additions to itself, in the endless expansion of its powers, in endless growth in wisdom and beauty, that the spirit of the human race finds its ideal. To reach this ideal, culture is an indispensable aid, and that is the true value of culture." Not a having and a resting, but a growing and a becoming, is the character of perfection as culture conceives it; and here, too, it coincides with religion.

And because men are all members of one great whole, and the sympathy which is in human nature will not allow one member to be indifferent to the rest or to have a perfect welfare independent of the rest, the expansion of our humanity, to suit the idea of perfection which culture forms, must be a *general* expansion. Perfection, as culture conceives it, is not possible while the individual remains isolated. The individual is required, under pain

of being stunted and enfeebled in his own development if he disobeys, to carry others along with him in his march towards perfection, to be continually doing all he can to enlarge and increase the volume of the human stream sweeping thitherward. And here, once more, culture lays on us the same obligation as religion, which says, as Bishop Wilson has admirably put it, that "to promote the kingdom of God is to increase and hasten one's own happiness."

But, finally, perfection, — as culture from a thorough disinterested study of human nature and human experience learns to conceive it, — is a harmonious expansion of *all* the powers which make the beauty and worth of human nature, and is not consistent with the overdevelopment of any one power at the expense of the rest. Here culture goes beyond religion, as religion is generally conceived by us.

If culture, then, is a study of perfection, and of harmonious perfection, general perfection, and perfection which consists in becoming something rather than in having something, in an inward condition of the mind and spirit, not in an outward set of circumstances, — it is clear that culture, instead of being the frivolous and useless thing which Mr. Bright, and Mr. Frederic Harrison,¹ and many other Liberals² are apt to call it, has a very important function to fulfill for mankind. And this function is particularly important in our modern world, of which the whole civilization is, to a much greater degree than the civilization of Greece and Rome, mechanical and external, and tends constantly to become more so. But above all in our own country has culture a weighty part to perform, because here that mechanical character which civilization tends to take everywhere is shown in the most eminent degree. Indeed nearly all the

¹ In an article entitled "Culture; a Dialogue" (*Fortnightly Review*, November, 1867), Mr. Harrison criticized Arnold's advocacy of culture as the remedy for the evils of society.

² The Liberal party in English politics is made up of adherents to progressive political principles.

characters of perfection, as culture teaches us to fix them, meet in this country with some powerful tendency which thwarts them and sets them at defiance. The idea of perfection as an *inward* condition of the mind and spirit is at variance with the mechanical and material civilization in esteem with us, and nowhere, as I have said, so much in esteem as with us. The idea of perfection as a *general* expansion of the human family is at variance with our strong individualism, our hatred of all limits to the unrestrained swing of the individual's personality, our maxim of "every man for himself." Above all, the idea of perfection as a *harmonious* expansion of human nature is at variance with our want of flexibility, with our inaptitude for seeing more than one side of a thing, with our intense energetic absorption in the particular pursuit we happen to be following. So culture has a rough task to achieve in this country. Its preachers have, and are likely long to have, a hard time of it, and they will much oftener be regarded, for a great while to come, as elegant or spurious Jeremiahs than as friends and benefactors. That, however, will not prevent their doing in the end good service if they persevere. And, meanwhile, the mode of action they have to pursue, and the sort of habits they must fight against, ought to be made quite clear for everyone to see who may be willing to look at the matter attentively and dispassionately.

Faith in machinery¹ is, I said, our besetting danger; often in machinery most absurdly disproportioned to the end which this machinery, if it is to do any good at all, is to serve; but always in machinery, as if it had a value in and for itself. What is freedom but machinery? What is population but machinery? What is coal but machinery? What are railroads but machinery? What is wealth but machinery? What are, even, religious organizations but machinery? Now almost every voice in England is accustomed to speak of these things as if they were precious ends in

¹ Arnold uses the word *machinery* throughout this essay in the sense of any kind of means for the accomplishment of an end.

themselves, and therefore had some of the characters of perfection indisputably joined to them. I have before now noticed Mr. Roebuck's stock argument for proving the greatness and happiness of England as she is, and for quite stopping the mouths of all gainsayers. Mr. Roebuck is never weary of reiterating this argument of his, so I do not know why I should be weary of noticing it. "May not every man in England say what he likes?" — Mr. Roebuck perpetually asks; and that, he thinks, is quite sufficient, and when every man may say what he likes, our aspirations ought to be satisfied. But the aspirations of culture, which is the study of perfection, are not satisfied, unless what men say, when they may say what they like, is worth saying, — has good in it, and more good than bad. In the same way the *Times*, replying to some foreign strictures on the dress, looks, and behavior of the English abroad, urges that the English ideal is that everyone should be free to do and to look just as he likes. But culture indefatigably tries, not to make what each raw person may like the rule by which he fashions himself, but to draw ever nearer to a sense of what is indeed beautiful, graceful, and becoming, and to get the raw person to like that.

And in the same way with respect to railroads and coal. Everyone must have observed the strange language current during the late discussions as to the possible failure of our supplies of coal. Our coal, thousands of people were saying, is the real basis of our national greatness; if our coal runs short, there is an end of the greatness of England. But what *is* greatness? — culture makes us ask. Greatness is a spiritual condition worthy to excite love, interest, and admiration; and the outward proof of possessing greatness is that we excite love, interest, and admiration. If England were swallowed up by the sea to-morrow, which of the two, a hundred years hence, would most excite the love, interest, and admiration of mankind, — would most, therefore, show the evidences of having possessed greatness, — the England of the last twenty years, or the England of Elizabeth,

of a time of splendid spiritual effort, but when our coal, and our industrial operations depending on coal, were very little developed? Well, then, what an unsound habit of mind it must be which makes us talk of things like coal or iron as constituting the greatness of England, and how salutary a friend is culture, bent on seeing things as they are, and thus dissipating delusions of this kind and fixing standards of perfection that are real!

Wealth, again, that end to which our prodigious works for material advantage are directed, — the commonest of commonplaces tells us how men are always apt to regard wealth as a precious end in itself; and certainly they have never been so apt thus to regard it as they are in England at the present time. Never did people believe anything more firmly than nine Englishmen out of ten at the present day believe that our greatness and welfare are proved by our being so very rich. Now, the use of culture is that it helps us, by means of its spiritual standard of perfection, to regard wealth as but machinery, and not only to say as a matter of words that we regard wealth as but machinery, but really to perceive and feel that it is so. If it were not for this purging effect wrought upon our minds by culture, the whole world, the future as well as the present, would inevitably belong to the Philistines.¹ The people who believe most that our greatness and welfare are proved by our being very rich, and who most give their lives and thoughts to becoming rich, are just the very people whom we call Philistines. Culture says: "Consider these people, then, their way of life, their habits, their manners, the very tones of their voice; look at them attentively; observe the literature they read, the things which give them pleasure, the words which come forth out of their mouths, the thoughts which make the furniture of their minds; would any amount of

¹ With Arnold a term of reproach for uncultured and commonplace people. The Philistines of the Old Testament were the traditional enemies of the "chosen people." Hence the nineteenth century application of the name to the enemies of culture: those whose interests were limited by narrow and material aims.

wealth be worth having with the condition that one was to become just like these people by having it?" And thus culture begets a dissatisfaction which is of the highest possible value in stemming the common tide of men's thoughts in a wealthy and industrial community, and which saves the future, as one may hope, from being vulgarized, even if it cannot save the present.

Population, again, and bodily health and vigor, are things which are nowhere treated in such an unintelligent, misleading, exaggerated way as in England. Both are really machinery; yet how many people all around us do we see rest in them and fail to look beyond them! Why, one has heard people, fresh from reading certain articles of the *Times* on the Registrar-General's returns of marriages and births in this country, who would talk of our large English families in quite a solemn strain, as if they had something in itself beautiful, elevating, and meritorious in them; as if the British Philistine would have only to present himself before the Great Judge with his twelve children, in order to be received among the sheep as a matter of right!

But bodily health and vigor, it may be said, are not to be classed with wealth and population as mere machinery; they have a more real and essential value. True; but only as they are more intimately connected with a perfect spiritual condition than wealth or population are. The moment we disjoin them from the idea of a perfect spiritual condition, and pursue them, as we do pursue them, for their own sake and as ends in themselves, our worship of them becomes as mere worship of machinery, as our worship of wealth or population, and as unintelligent and vulgarizing a worship as that is. Everyone with anything like an adequate idea of human perfection has distinctly marked this subordination to higher and spiritual ends of the cultivation of bodily vigor and activity. "Bodily exercise profiteth little; but godliness is profitable unto all things," says the author of the Epistle to Timothy. And the utilitarian Franklin says just as explicitly: "Eat and drink such an exact quantity as suits the constitution of thy body, *in reference to the services of the mind.*"

But the point of view of culture, keeping the mark of human perfection simply and broadly in view, and not assigning to this perfection, as religion or utilitarianism assigns to it, a special and limited character, this point of view, I say, of culture is best given by these words of Epictetus: "It is a sign of ἀφύτα," says he, — that is, of a nature not finely tempered, — "to give yourselves up to things which relate to the body; to make, for instance, a great fuss about exercise, a great fuss about eating, a great fuss about drinking, a great fuss about walking, a great fuss about riding. All these things ought to be done merely by the way: the formation of the spirit and character must be our real concern." This is admirable; and, indeed, the Greek word ἐβύτα, a finely tempered nature, gives exactly the notion of perfection as culture brings us to conceive it: a harmonious perfection, a perfection in which the characters of beauty and intelligence are both present, which unites "the two noblest of things," — as Swift, who of one of the two, at any rate, had himself all too little, most happily calls them in his *Battle of the Books*, — "the two noblest of things, *sweetness and light*." The ἐβύτης is the man who tends towards sweetness and light; the ἀφύτης, on the other hand, is our Philistine. The immense spiritual significance of the Greeks is due to their having been inspired with this central and happy idea of the essential character of human perfection; and Mr. Bright's misconception of culture, as a smattering of Greek and Latin, comes itself, after all, from this wonderful significance of the Greeks having affected the very machinery of our education, and is in itself a kind of homage to it.

In thus making sweetness and light to be characters of perfection, culture is of like spirit with poetry, follows one law with poetry. Far more than on our freedom, our population, and our industrialism, many amongst us rely upon our religious organizations to save us. I have called religion a yet more important manifestation of human nature than poetry, because it has worked on a broader scale of perfection, and with greater masses

of men. But the idea of beauty and of a human nature perfect on all its sides, which is the dominant idea of poetry, is a true and invaluable idea, though it has not yet had the success that the idea of conquering the obvious faults of our animality, and of a human nature perfect on the moral side, — which is the dominant idea of religion, — has been enabled to have; and it is destined, adding to itself the religious idea of a devout energy, to transform and govern the other.

The best art and poetry of the Greeks, in which religion and poetry are one, in which the idea of beauty and of a human nature perfect on all sides adds to itself a religious and devout energy, and works in the strength of that, is on this account of such surpassing interest and instructiveness for us, though it was, — as, having regard to the human race in general, and, indeed, having regard to the Greeks themselves, we must own, — a premature attempt, an attempt which for success needed the moral and religious fiber in humanity to be more braced and developed than it had yet been. But Greece did not err in having the idea of beauty, harmony, and complete human perfections so present and paramount. It is impossible to have this idea too present and paramount; only, the moral fiber must be braced too. And we, because we have braced the moral fiber, are not on that account in the right way, if at the same time the idea of beauty, harmony, and complete human perfection is wanting or misapprehended amongst us; and evidently it is wanting or misapprehended at present. And when we rely as we do on our religious organizations, which in themselves do not and cannot give us this idea, and think we have done enough if we make them spread and prevail, then I say we fall into our common fault of overvaluing machinery.

Nothing is more common than for people to confound the inward peace and satisfaction which follows the subduing of the obvious faults of our animality with what I many call absolute inward peace and satisfaction, — the peace and satisfaction which are reached as we draw near to complete spiritual

perfection, and not merely to moral perfection, or rather to relative moral perfection. No people in the world have done more and struggled more to attain this relative moral perfection than our English race has. For no people in the world has the command to *resist the devil*, to *overcome the wicked one*, in the nearest and most obvious sense of those words, had such a pressing force and reality. And we have had our reward, not only in the great worldly prosperity which our obedience to this command has brought us, but also, and far more, in great inward peace and satisfaction. But to me few things are more pathetic than to see people, on the strength of the inward peace and satisfaction which their rudimentary efforts towards perfection have brought them, employ, concerning their incomplete perfection and the religious organizations within which they have found it, language which properly applies only to complete perfection, and is a far-off echo of the human soul's prophecy of it. Religion itself, I need hardly say, supplies them in abundance with this grand language. And very freely do they use it; yet it is really the severest possible criticism of such an incomplete perfection as alone we have yet reached through our religious organizations.

The impulse of the English race towards moral development and self-conquest has nowhere so powerfully manifested itself as in Puritanism. Nowhere has Puritanism found so adequate an expression as in the religious organization of the Independents. The modern Independents have a newspaper, the *Non-conformist*, written with great sincerity and ability. The motto, the standard, the profession of faith, which this organ of theirs carries aloft, is: "The Dissidence of Dissent and the Protestantism of the Protestant religion." There is sweetness and light, and an ideal of complete harmonious human perfection! One need not go to culture and poetry to find language to judge it. Religion, with its instinct for perfection, supplies language to judge it, language, too, which is in our mouths every day. "Finally, be of one mind, united in feeling," says St. Peter. There is an ideal which judges the Puritan ideal: "The Dis-

sidence of Dissent and the Protestantism of the Protestant religion!" And religious organizations like this are what people believe in, rest in, would give their lives for! Such, I say, is the wonderful virtue of even the beginnings of perfections, of having conquered even the plain faults of our animality, that the religious organization which has helped us to do it can seem to us something precious, salutary, and to be propagated, even when it wears such a brand of imperfection on its forehead as this. And men have got such a habit of giving to the language of religion a special application, of making it a mere jargon, that for the condemnation which religion itself passes on the shortcomings of their religious organizations they have no ear; they are sure to cheat themselves and to explain this condemnation away. They can only be reached by the criticism which culture, like poetry, speaking a language not to be sophisticated, and resolutely testing these organizations by the ideal of a human perfection complete on all sides, applies to them.

But men of culture and poetry, it will be said, are again and again failing, and failing conspicuously, in the necessary first stage to a harmonious perfection, in the subduing of the great obvious faults of our animality, which it is the glory of these religious organizations to have helped us to subdue. True, they do often so fail. They have often been without the virtues as well as the faults of the Puritan; it has been one of their dangers that they so felt the Puritan's faults that they too much neglected the practice of his virtues. I will not, however, exculpate them at the Puritan's expense. They have often failed in morality, and morality is indispensable. And they have been punished for their failure, as the Puritan has been rewarded for his performance. They have been punished wherein they erred; but their ideal of beauty, of sweetness and light, and a human nature complete on all its sides remains the true ideal of perfection still; just as the Puritan's ideal of perfection remains narrow and inadequate, although for what he did well he has been richly rewarded. Notwithstanding the mighty results of

the Pilgrim Fathers' voyage, they and their standard of perfection are rightly judged when we figure to ourselves Shakespeare or Virgil — souls in whom sweetness and light, and all that in human nature is most humane, were eminent — accompanying them on their voyage, and think what intolerable company Shakespeare and Virgil would have found them! In the same way let us judge the religious organizations which we see all around us. Do not let us deny the good and the happiness which they have accomplished; but do not let us fail to see clearly that their idea of human perfection is narrow and inadequate, and that the Dissidence of Dissent and the Protestantism of the Protestant religion will never bring humanity to its true goal. As I said with regard to wealth: Let us look at the life of those who live in and for it, — so I say with regard to the religious organizations. Look at the life imagined in such a newspaper as the *Nonconformist*, — a life of jealousy of the Establishment, disputes, tea-meetings, openings of chapels, sermons; and then think of it as an ideal of a human life completing itself on all sides, and aspiring with all its organs after sweetness, light, and perfection!

Another newspaper, representing, like the *Nonconformist*, one of the religious organizations of this country, was a short time ago giving an account of the crowd at Epsom on the Derby day, and of all the vice and hideousness which was to be seen in that crowd; and then the writer turned suddenly round upon Professor Huxley, and asked him how he proposed to cure all this vice and hideousness without religion. I confess I felt disposed to ask the asker this question: And how do you propose to cure it with such a religion as yours? How is the ideal of a life so unlovely, so unattractive, so incomplete, so narrow, so far removed from a true and satisfying ideal of human perfection, as is the life of your religious organization as you yourself image it, to conquer and transform all this vice and hideousness? Indeed, the strongest plea for the study of perfection as pursued by culture, the clearest proof of the actual inadequacy of the

idea of perfection held by the religious organizations, — expressing, as I have said, the most widespread effort which the human race has yet made after perfection, — is to be found in the state of our life and society with these in possession of it, and having been in possession of it I know not how many hundred years. We are all of us included in some religious organization or other; we all call ourselves, in the sublime and aspiring language of religion which I have before noticed, *children of God*. Children of God; — it is an immense pretension! — and how are we to justify it? By the works which we do, and the words which we speak. And the work which we collective children of God do, our grand center of life, our *city* which we have builded for us to dwell in, is London! London, with its unutterable external hideousness, and with its internal canker of *publice egestas, privatim opulentia*,¹ — to use the words which Sallust puts into Cato's mouth about Rome, — unequaled in the world! The word, again, which we children of God speak, the voice which most hits our collective thought, the newspaper with the largest circulation in England, nay, with the largest circulation in the whole world, is the *Daily Telegraph*! I say that when our religious organizations, — which I admit to express the most considerable effort after perfection that our race has yet made, — land us in no better result than this, it is high time to examine carefully their idea of perfection, to see whether it does not leave out of account sides and forces of human nature which we might turn to great use; whether it would not be more operative if it were more complete. And I say that the English reliance on our religious organizations and on their ideas of human perfection just as they stand is like our reliance on freedom, on muscular Christianity, on population, on coal, on wealth, — mere belief in machinery, and unfruitful; and that it is wholesomely counteracted by culture, bent on seeing things as they are, and on drawing the human race onwards to a more complete, a harmonious perfection.

¹ Public want and private wealth.

Culture, however, shows its single-minded love of perfection, its desire simply to make reason and the will of God prevail, its freedom from fanaticism, by its attitude towards all this machinery, even while it insists that it *is* machinery. Fanatics, seeing the mischief men do themselves by their blind belief in some machinery or other, — whether it is wealth and industrialism, or whether it is the cultivation of bodily strength and activity, or whether it is a political organization, — or whether it is a religious organization, — oppose with might and main the tendency to this or that political and religious organization, or to games and athletic exercises, or to wealth and industrialism, and try violently to stop it. But the flexibility which sweetness and light give, and which is one of the rewards of culture pursued in good faith, enables a man to see that a tendency may be necessary, and even, as a preparation for something in the future, salutary, and yet that the generations or individuals who obey this tendency are sacrificed to it, that they fall short of the hope of perfection by following it; and that its mischiefs are to be criticized, lest it should take too firm a hold and last after it has served its purpose.

Mr. Gladstone well pointed out, in a speech at Paris, — and others have pointed out the same thing, — how necessary is the present great movement towards wealth and industrialism, in order to lay broad foundations of material well-being for the society of the future. The worst of these justifications is that they are generally addressed to the very people engaged, body and soul, in the movement in question; at all events, that they are always seized with the greatest avidity by these people, and taken by them as quite justifying their life; and that thus they tend to harden them in their sins. Now, culture admits the necessity of the movement towards fortune-making and exaggerated industrialism, readily allows that the future may derive benefit from it; but insists, at the same time, that the passing generations of industrialists — forming, for the most part, the stout main body of Philistinism — are sacrificed to it. In the

same way, the result of all the games and sports which occupy the passing generation of boys and young men may be the establishment of a better and sounder physical type for the future to work with. Culture does not set itself against the games and sports; it congratulates the future, and hopes it will make a good use of its improved physical basis; but it points out that our passing generation of boys and young men is, meantime, sacrificed. Puritanism was perhaps necessary to develop the moral fiber of the English race, Nonconformity to break the yoke of ecclesiastical domination over men's minds and to prepare the way for freedom of thought in the distant future; still, culture points out that the harmonious perfection of generations of Puritans and Nonconformists has been, in consequence, sacrificed. Freedom of speech may be necessary for the society of the future, but the young lions of the *Daily Telegraph* in the meanwhile are sacrificed. A voice for every man in his country's government may be necessary for the society of the future, but meanwhile Mr. Beales and Mr. Bradlaugh are sacrificed.

Oxford, the Oxford of the past, has many faults; and she has heavily paid for them in defeat, in isolation, in want of hold upon the modern world. Yet we in Oxford, brought up amidst the beauty and sweetness of that beautiful place, have not failed to seize one truth, — the truth that beauty and sweetness are essential characters of a complete human perfection. When I insist on this, I am all in the faith and tradition of Oxford. I say boldly that this, our sentiment for beauty and sweetness, our sentiment against hideousness and rawness, has been at the bottom of our attachment to so many beaten causes, of our opposition to so many triumphant movements. And the sentiment is true, and has never been wholly defeated, and has shown its power even in its defeat. We have not won our political battles, we have not carried our main points, we have not stopped our adversaries' advance, we have not marched victoriously with the modern world; but we have told silently upon the mind of

the country, we have prepared currents of feeling which sap our adversaries' position when it seems gained, we have kept up our own communications with the future. Look at the course of the great movement¹ which shook Oxford to its center some thirty years ago! It was directed, as anyone who reads Dr. Newman's *Apology*² may see, against what in one word may be called "Liberalism." Liberalism prevailed; it was the appointed force to do the work of the hour; it was necessary, it was inevitable, that it should prevail. The Oxford movement was broken, it failed; our wrecks are scattered on every shore: —

Quæ regio in terris nostri non plena laboris?

But what was it, this liberalism, as Dr. Newman saw it, and as it really broke the Oxford movement? It was the great middle-class liberalism, which had for the cardinal points of its belief the Reform Bill of 1832, and local self-government, in politics; in the social sphere, free trade, unrestricted competition, and the making of large industrial fortunes; in the religious sphere the Dissidence of Dissent and the Protestantism of the Protestant religion. I do not say that other and more intelligent forces than this were not opposed to the Oxford movement: but this was the force which really beat it; this was the force which Dr. Newman felt himself fighting with; this was the force which till only the other day seemed to be the paramount force in this country, and to be in possession of the future; this was the force whose achievements filled Mr. Lowe with such inexpressible admiration, and whose rule he was so horror-struck to see threatened. And where is this great force of Philistinism now? It is thrust into the second rank, it is become a power of yesterday, it has lost the future. A new power has suddenly appeared,

¹ The Oxford or Tractarian Movement, which began at Oxford in 1833 under the leadership of John Henry (afterwards Cardinal) Newman, and John Keble, had as its object the intensifying of religious faith and the revival of ecclesiastical and ceremonial tradition in the Church of England.

² Newman's *Apologia pro Vita Sua*, an explanation of his conversion to the Roman Church.

a power which it is impossible yet to judge fully, but which is certainly a wholly different force from middle-class liberalism; different in its cardinal points of belief, different in its tendencies in every sphere. It loves and admires neither the legislation of middle-class Parliaments, nor the local self-government of middle-class vestries, nor the unrestricted competition of middle-class industrialists, nor the Dissidence of middle-class Dissent and the Protestantism of middle-class Protestant religion. I am not now praising this new force, or saying that its own ideals are better; all I say is, that they are wholly different. And who will estimate how much the currents of feeling created by Dr. Newman's movements, the keen desire for beauty and sweetness which it nourished, the deep aversion it manifested to the hardness and vulgarity of middle-class liberalism, the strong light it turned on the hideous and grotesque illusions of middle-class Protestantism, — who will estimate how much all these contributed to swell the tide of secret dissatisfaction which has mined the ground under the self-confident liberalism of the last thirty years, and has prepared the way for its sudden collapse and supersession? It is in this manner that the sentiment of Oxford for beauty and sweetness conquers, and in this manner long may it continue to conquer!

In this manner it works to the same end as culture, and there is plenty of work for it yet to do. I have said that the new and more democratic force which is now superseding our old middle-class liberalism cannot yet be rightly judged. It has its main tendencies still to form. We hear promises of its giving us administrative reform, law reform, reform of education, and I know not what; but those promises come rather from its advocates, wishing to make a good plea for it and to justify it for superseding middle-class liberalism, than from clear tendencies which it has itself yet developed. But meanwhile it has plenty of well-intentioned friends against whom culture may with advantage continue to uphold steadily its ideal of human perfection; that this is *an inward spiritual activity, having for its*

characters increased sweetness, increased light, increased life, increased sympathy. Mr. Bright, who has a foot in both worlds, the world of middle-class liberalism and the world of democracy, but who brings most of his ideas from the world of middle-class liberalism in which he was bred, always inclines to inculcate that faith in machinery to which, as we have seen, Englishmen are so prone, and which has been the bane of middle-class liberalism. He complains with a sorrowful indignation of people who "appear to have no proper estimate of the value of the franchise"; he leads his disciples to believe — what the Englishman is always too ready to believe — that the having a vote, like the having a large family, or a large business, or large muscles, has in itself some edifying and perfecting effect upon human nature. Or else he cries out to the democracy, — "the men," as he calls them, "upon those shoulders the greatness of England rests," — he cries out to them: "See what you have done! I look over this country and see the cities you have built, the railroads you have made, the manufactures you have produced, the cargoes which freight the ships of the greatest mercantile navy the world has ever seen! I see that you have converted by your labors what was once a wilderness, these islands, into a fruitful garden; I know that you have created this wealth, and are a nation whose name is a word of power throughout all the world." Why, this is just the very style of laudation with which Mr. Roebuck or Mr. Lowe debauches the minds of the middle classes, and makes such Philistines of them. It is the same fashion of teaching a man to value himself not on what he *is*, not on his progress in sweetness and light, but on the number of the railroads he has constructed, or the bigness of the tabernacle he has built. Only the middle classes are told they have done it all with their energy, self-reliance, and capital, and the democracy are told they have done it all with their hands and sinews. But teaching the democracy to put its trust in achievements of this kind is merely training them to be Philistines to take the place of the Philistines whom they are superseding;

and they too, like the middle class, will be encouraged to sit down at the banquet of the future without having on a wedding garment, and nothing excellent can then come from them. Those who know their besetting faults, those who have watched them and listened to them, or those who will read the instructive account recently given of them by one of themselves, the *Journeyman Engineer*, will agree that the idea which culture sets before us of perfection — an increased spiritual activity, having for its characters increased sweetness, increased light, increased life, increased sympathy — is an idea which the new democracy needs far more than the idea of the blessedness of the franchise or the wonderfulness of its own industrial performances.

Other well-meaning friends of this new power are for leading it, not in the old ruts of middle-class Philistinism, but in ways which are naturally alluring to the feet of democracy, though in this country they are novel and untried ways. I may call them the ways of Jacobinism.¹ Violent indignation with the past, abstract systems of renovation applied wholesale, a new doctrine drawn up in black and white for elaborating down to the very smallest details a rational society for the future, — these are the ways of Jacobinism. Mr. Frederic Harrison and other disciples of Comte² — one of them, Mr. Congreve, is an old acquaintance of mine and I am glad to have an opportunity of publicly expressing my respect for his talents and character — are among the friends of democracy who are for leading it in paths of this kind. Mr. Frederic Harrison is very hostile to culture, and from a natural enough motive; for culture is the eternal opponent of the two things which are the signal marks of Jacobinism, — its fierceness, and its addiction to an abstract system. Culture is always assigning to system-makers and systems a smaller share in the bent of human destiny than their friends like. A

¹ Violent radicalism. The Jacobin party played an aggressive part in the French Revolution.

² Auguste Comte, the founder of the "Positivist" philosophy, who paid an exalted deference to the importance of public opinion.

current in people's minds sets towards new ideas; people are dissatisfied with their old narrow stock of Philistine ideas, Anglo-Saxon ideas, or any other; and some man, some Bentham of Comte, who has the real merit of having early and strongly felt and helped the new current, but who brings plenty of narrowness and mistakes of his own into his feeling and help of it, is credited with being the author of the whole current, the fit person to be intrusted with its regulation and to guide the human race.

The excellent German historian of the mythology of Rome, Preller, relating the introduction at Rome under the Tarquins of the worship of Apollo, the god of light, healing, and reconciliation, will have us observe that it was not so much the Tarquins who brought to Rome the new worship of Apollo, as a current in the mind of the Roman people which set powerfully at that time towards a new worship of this kind, and away from the old run of Latin and Sabine religious ideas. In a similar way, culture directs our attention to the natural current there is in human affairs, and to its continual working, and will not let us rivet our faith upon any one man and his doings. It makes us see not only his good side, but also how much in him was of necessity limited and transient; nay, it even feels a pleasure, a sense of an increased freedom and of an ampler future, in so doing.

I remember, when I was under the influence of a mind to which I feel the greatest obligations, the mind of a man who was the very incarnation of sanity and clear sense, a man the most considerable, it seems to me, whom America has yet produced, — Benjamin Franklin, — I remember the relief with which, after long feeling the sway of Franklin's imperturbable common-sense, I came upon a project of his for a new version of the Book of Job to replace the old version, the style of which, says Franklin, has become obsolete, and thence less agreeable. "I give," he continues, "a few verses, which may serve as a sample of the kind of version I would recommend." We all recollect the famous verse in our translation: "Then Satan answered the Lord and

said: 'Doth Job fear God for nought?'" Franklin makes this: "Does your Majesty imagine that Job's good conduct is the effect of mere personal attachment and affection?" I well remember how, when first I read that, I drew a deep breath of relief, and said to myself: "After all, there is a stretch of humanity beyond Franklin's victorious good sense!" So, after hearing Bentham cried loudly up as the renovator of modern society, and Bentham's mind and ideas proposed as the rulers of our future, I open the *Deontology*. There I read: "While Xenophon was writing his history and Euclid teaching geometry, Socrates and Plato were talking nonsense under pretense of talking wisdom and morality. This morality of theirs consisted in words; this wisdom of theirs was the denial of matters known to every man's experience." From the moment of reading that, I am delivered from the bondage of Bentham! The fanaticism of his adherents can touch me no longer. I feel the inadequacy of his mind and ideas for supplying the rule of human society, for perfection.

Culture tends always thus to deal with the men of a system, of disciples of a school; with men like Comte, or the late Mr. Buckle, or Mr. Mill. However much it may find to admire in these personages, or in some of them, it nevertheless remembers the text: "Be not ye called Rabbi!" and it soon passes on from any Rabbi. But Jacobinism loves a Rabbi; it does not want to pass on from its Rabbi in pursuit of a future and still unreached perfection; it wants its Rabbi and its ideas to stand for perfection, that they may with the more authority recast the world; and for Jacobinism, therefore, culture, — eternally passing onwards and seeking, — is an impertinence and an offense. But culture, just because it resists this tendency of Jacobinism to impose on us a man with limitations and errors of his own along with the true ideas of which he is the organ, really does the world and Jacobinism itself a service.

So, too, Jacobinism, in its fierce hatred of the past and of those whom it makes liable for the sins of the past, cannot away with

the inexhaustible indulgence proper to culture, the consideration of circumstances, the severe judgment of actions joined to the merciful judgment of persons "The man of culture is in politics," cries Mr. Frederic Harrison, "one of the poorest mortals alive!" Mr. Frederic Harrison wants to be doing business, and he complains that the man of culture stops him with a "turn for small fault-finding, love of selfish ease, and indecision in action." Of what use is culture, he asks, except for "a critic of new books or a professor of *belles-lettres*?" Why, it is of use because, in presence of the fierce exasperation which breathes, or rather, I may say, hisses through the whole production in which Mr. Frederic Harrison asks that question, it reminds us that the perfection of human nature is sweetness and light. It is of use because, like religion, — that other effort after perfection, — it testifies that, where bitter envying and strife are, there is confusion and every evil work.

The pursuit of perfection, then, is the pursuit of sweetness and light. He who works for sweetness and light works to make reason and the will of God prevail. He who works for machinery, he who works for hatred, works only for confusion. Culture looks beyond machinery, culture hates hatred; culture has one great passion, the passion for sweetness and light. It has one even yet greater! — the passion for making them *prevail*. It is not satisfied till we *all* come to a perfect man; it knows that the sweetness and light of the few must be imperfect until the raw and unkindled masses of humanity are touched with sweetness and light. If I have not shrunk from saying that we must work for sweetness and light, so neither have I shrunk from saying that we must have a broad basis, must have sweetness and light for as many as possible. Again and again I have insisted how those are the happy moments of humanity, how those are the marking epochs of a people's life, how those are the flowering times for literature and art and all the creative power of genius, when there is a *national* glow of life and thought, when the whole of society is in the fullest measure permeated by

thought, sensible to beauty, intelligent and alive. Only it must be *real* thought and *real* beauty; *real* sweetness and *real* light. Plenty of people will try to give the masses, as they call them, an intellectual food prepared and adapted in the way they think proper for the actual condition of the masses. The ordinary popular literature is an example of this way of working on the masses. Plenty of people will try to indoctrinate the masses with the set of ideas and judgments constituting the creed of their own profession or party. Our religious and political organizations give an example of this way of working on the masses. I condemn neither way; but culture works differently. It does not try to teach down to the level of inferior classes; it does not try to win them for this or that sect of its own, with ready-made judgments and watchwords. It seeks to do away with classes; to make the best that has been thought and known in the world current everywhere; to make all men live in an atmosphere of sweetness and light, where they may use ideas, as it uses them itself, freely, — nourished, and not bound by them.

This is the *social idea*; and the men of culture are the true apostles of equality. The great men of culture are those who have had a passion for diffusing, for making prevail, for carrying from one end of society to the other, the best knowledge, the best ideas of their time; who have labored to divest knowledge of all that was harsh, uncouth, difficult, abstract, professional, exclusive; to humanize it, to make it efficient outside the clique of the cultivated and learned, yet still remaining the *best* knowledge and thought of the time, and a true source, therefore, of sweetness and light. Such a man was Abelard in the Middle Ages, in spite of all his imperfections; and thence the boundless emotion and enthusiasm which Abelard excited. Such were Lessing and Herder in Germany, at the end of the last century; and their services to Germany were in this way inestimably precious. Generations will pass, and literary monuments will accumulate, and works far more perfect than the works of

Lessing and Herder will be produced in Germany; and yet the names of these two men will fill a German with a reverence and enthusiasm such as the names of the most gifted masters will hardly awaken. And why? Because they *humanized* knowledge; because they broadened the basis of life and intelligence; because they worked powerfully to diffuse sweetness and light, to make reason and the will of God prevail. With Saint Augustine they said: "Let us not leave thee alone to make in the secret of thy knowledge, as thou didst before the creation of the firmament, the division of light from darkness; let the children of thy spirit, placed in their firmament, make their light shine upon the earth, mark the division of night and day, and announce the revolution of the times; for the old order is passed, and the new arises; the night is spent, the day is come forth; and thou shalt crown the year with thy blessing, when thou shalt send forth laborers into thy harvest sown by other hands than theirs; when thou shalt send forth new laborers to new seed-times, whereof the harvest shall be not yet."

IDOLS¹

CHARLES MILLS GAYLEY

Ephraim is joined to idols. — *Hosea*, iv. 17

THE world was never better worth preparing for. The panorama unrolled before the mind was never more gorgeous: — a new renaissance revealing reaches unimagined; prophesying splendor unimaginable; unveiling mysteries of time and space and natural law and human potency.

Archæology uncovers with a spade the world of Ariadne and of Minos, of Agamemnon and of Priam. Where Jason launched the Argo, paintings are unearthed that antedate Apelles. Mummied crocodiles disgorge their papyri; and we read the administrative record of the Ptolemies. Bacchylides breaks the silence of centuries; Menander himself mounts the stage, and in no borrowed Roman sock; and Aristotle reappears to shed fresh light upon the constitution of the Athenians.

History, availing herself of cognate sciences, deciphers documents and conditions anew; and the vision of the past is reinterpreted in terms of social and economic actuality. Emigrations and conquests become a modern tale of commerce and industrial stress. Cæsar and Agrippina, Cromwell and Marie Antoinette, are all to read again; and the Bard of Venusia acquires a new and startling modernity as the literary advance agent of a plutocratic wine firm. As in a "glass prospective" literature is viewed; and kaleidoscopic transformations of *gest* and ballad, epic and drama, cross-sections of the crypt of fiction, dazzle the eye of critic and philologist and poet.

¹ Copyright. Reprinted from *Idols of Education* by permission of the author and of Doubleday, Page and Company. In part a commencement address delivered at the University of Michigan in 1909.

With golden keys of psychology, history, and philology the anthropologist unlocks the mind of primitive man. The student of the holier things invades the Temple itself; and from day to day the sacramental doors swing back on age-long galleries of worship.

Taking fresh heart of ethics, economics wears a new and most seductive smile. No longer the minimizing of material cost, but the maximizing of vital value, she regards. She seeks the psychic income, the margin of leisure for the soul, the margin of health for the body: the greatest of national assets — the true wealth of nations. To the modern problems of social and political theory and of jurisprudence, of municipal and national and colonial administration, a similar fascination of beneficent discovery attracts; and to that development of international politics which aims at constitutional law rather than the substantive private law of nations.

Geology multiplies her æons, and astronomy her glittering fields. "Hills peep o'er hills, and Alps on Alps" of new discovered cause "arise." "The idea of the electron has broken the framework of the old physics to pieces, has revived ancient atomistic hypotheses, and made of them principles," and radioactivity "has opened to the explorer a New America full of wealth yet unknown." The science of the law of celestial movements has given birth to the science of the substance of celestial bodies; and, with astrophysics, we study more narrowly than ever our one star and its outcasts, the planets. We wonderingly contemplate the transport of matter from star to star — and from planet to planet, maybe, of life.

Geology has given birth to physiography. We pass from inorganic to organic, and probe the interaction of physical environment and animate nature. In evolutionary science they are saying that new species leap into being at a wave of the wand of mutation; and the war between Mendelism and Darwinism wages. The knighthood of the Quest of Life enrolls in the order of psychic mystery or the order of mechanism,

and presses on. Though neither win to the Grail, each wins nearer to its law. By the delicate ministrations of surgery, life is prolonged. Immunization lifts ever higher her red cross.

Engineering advances, agriculture advances, commerce expands. We compass the earth, we swim the seas, we ride the air. Our voices pierce the intervals of space, and our thoughts the unplumbed waves of ether. And from her watch-tower scrutinizing all — science, pure and applied, history and art, mechanism and spirit, teleology, evolution — the science of sciences, Divine Philosophy rounds out her calm survey. Never more tempting, more vital, the problem than that which she faces now; the problem of the fundamental character of personality. "In the light of all this evolution or mutation, what is God?" she asks. "Is he, too, but a cosmic process in which we assist; or an eternal standard of perfection against which we measure ourselves and in terms of which we strive?"

The world of learning was never better worth preparing for. Why is it, then, that from every university in the land, and from every serious journal, there goes up the cry, "Our young people were never more indifferent."

How many nights a week does the student spend in pursuits nonacademic; how great a proportion of his days? What with so-called "college activities," by which he must prove his allegiance to the university, and social functions by which he must recreate his jaded soul, no margin is left for the one and only college activity — which is study. Class meetings, business meetings, committee meetings, editorial meetings, football rallies, baseball rallies, pyjama rallies, vicarious athletics on the bleachers, garrulous athletics in the dining-room and parlor and on the porch, rehearsals of the glee club, rehearsals of the mandolin club and of the banjo, rehearsals for dramatics (a word to stand the hair on end), college dances and class banquets, fraternity dances and suppers, preparations for the dances and banquets, more committees for the preparations; a running up

and down the campus for ephemeral items for ephemeral articles in ephemeral papers, a soliciting of advertisements, a running up and down for subscriptions to the dances and the dinners, and the papers and the clubs; a running up and down in college politics, making tickets, pulling wires, adjusting combinations, canvassing for votes — canvassing the girls for votes, spending hours at sorority houses for votes — spending hours at sorority houses for sentiment; talking rubbish unceasingly, thinking rubbish, revamping rubbish — rubbish about high jinks, rubbish about low, rubbish about rallies, rubbish about pseudo-civic honor, rubbish about girls; — what margin of leisure is left for the one activity of the college, which is study?

In Oxford and Cambridge, than which no universities have turned out finer, cleaner, more manly, more highly cultivated, and more practically trained scholars, statesmen, empire builders, or more generous enthusiasts for general athletics and clean sport — in Oxford and Cambridge the purpose is study, and the honors are paid to the scholar. There are no undergraduate newspapers, no class meetings, no college politics, no football rallies, no business managers, no claques for organized applause, no yell leaders, no dances, no social functions of the mass. Social intercourse during term between the sexes is strictly forbidden; and it is a matter of college loyalty to live up to the rule. Of nonacademic activities there are but two — athletics and conversation. They are not a function but a recreation; nor are they limited to specialists whose reputation is professed. Young Oxonians, in general, lead a serene and indistracted, but rich and wholesome life. They cultivate athletics because each is an active devotee of some form of sport. And conversation — in junior commons, in the informal clubs, in study or in tutor's room — it is an education, a passion, an art.

A foreigner attending, in an American university, an assembly of student speakers will be justified in concluding that the university exists for nothing but so-called "student activities."

The real purpose of the university will not be mentioned, for usually our undergraduates live two lives — distinct; one utterly nonacademic. The nonacademic is for them the real; the scholarly an encroachment. The student who regards the scholarly as paramount is deficient in "allegiance to his university."

Athletics, meanwhile, which should play a necessary part in the physical, and therefore spiritual, development of all students, are relegated to ten per cent of the students. The rest assist — on the bleachers. The ninety per cent are killing two birds with one stone. They are taking second-hand exercise; and, by their grotesque and infantile applause, they are displaying what they call their "loyalty."

Those *noctes cœnæque deum* of history and poetry and philosophical discourse, to the memory of which the older generation reverts with rapture, have faded in this light of common day. In the hurry of mundane pursuit the student rarely halts to read, rarely to consider; rarely to discuss the concerns of the large life.

President Schurman has recently said that there has been no decline of scholarship in the people's universities; but only in the older institutions of the East, to which rich parents send their sons with the view to the advantages of social position; and that in the people's universities the social standing of students has never cut so much figure as scholarship. The assurance is comfortable; but it obscures the issue. If by "social standing" the president of Cornell means position in the coteries of wealth, fashion, conviviality, it may be that "social standing" bulks larger in the older university than in the university of the state. But the fact is that, in student esteem, East and West, social standing means no such thing: it means the position achieved by prominence in nonacademic or "campus" activities. And in student esteem such prominence cuts a far more important figure than that of either wealth or scholarship. Such prominence has been gaining ground for

fifteen years. So long as the social pressure of the university is toward mundane pursuits, it will be vain to expect the student to achieve distinction in that for which the university stands.

This false standard of prominence, with its feigned allegiance to the interests of the university, has produced that class of student which, adapting from the *Jungle Book*, I call the "Bandar-log."

Mowgli had never seen an Indian city before, and though this was almost a heap of ruins it seemed very wonderful and splendid. Some king had built it long ago on a little hill. . . . The Bandar-logs called the place their city, and pretended to despise the jungle people because they lived in the forest. And yet they never knew what the buildings were made for nor how to use them. They would sit in circles in the hall of the King's council-chamber and scratch for fleas and pretend to be men; or they would run in and out of the roofless houses and collect pieces of plaster and old bricks in the corner and forget where they had hidden them, and fight and cry in scuffling crowds, and then break off to play up and down the terraces of the King's garden, where they would shake the rose-trees and the oranges in sport to see the fruit and flowers fall. They explored all the passages and dark tunnels in the palace, and the hundreds of little dark rooms, but they never remembered what they had seen and what they had not, and so drifted about in ones and twos or crowds, telling one another that they were doing as men did — or shouting "there are none in the jungle so wise and good and clever and strong and gentle as the Bandar-log." Then they would tire and seek the treetop, hoping the jungle people would notice them . . . and then they joined hands and danced about and sang their foolish songs. "They have no law," said Mowgli to himself, "no hunting call and no leaders." . . . And he could not help laughing when they cried, "we are great, we are free, we are wonderful . . . we all say so, and so it must be true . . . you shall carry our words back to the jungle people that they may notice us in future."

The Bandar-log is with us. Busy to no purpose, imitative, aimless; boastful but unreliable; inquisitive but quickly losing his interest; fitful, inconsequential, platitudinous, forgetful; noisy, sudden, ineffectual. — The Bandar-log must go.

Because it is the spirit of the American university to prove the things that are new, to hold fast that which is good; to face abuses boldly and to reform them; because I am the son of an American university, and have grown in her teaching, and in my observation of many universities and many schools, to regard the evil as transitory and abuses as remediable, I have ventured in this essay to set down simply, and with a frankness that I trust may not be misconstrued, some of the vagaries of our educational system at the present time, and some of the reasons for their existence. For I am sure that in the recognition of the cause is to be found the means of cure.

Another class also of students makes, though unconsciously, for the wane of general scholarship — the class of the prematurely vocational. It is not futile, like that of the Bandar-log, but earnest, and with a definite end in view. Still, unwisely guided to immature choice and hasty study of a profession, it not only misses the liberal equipment necessary for the ultimate mastery of life, but indirectly diverts the general scope of education from its true ideals.

The spirit of the Renaissance, says a modern historian of poetry, is portrayed in a picture by Moretto. It is of a young Venetian noble. "The face is that of one in the full prime of life and of great physical strength; very handsome, heavy and yet tremulously sensitive, the large eyes gazing at something unseen, and seeming to dream of vastness. On his bonnet is a golden plaque with three words of Greek inscribed on it — *ὁὐ λίαν ποθῶ* — "Oh, but I am consumed with excess of desire."

If this be the motto of the Renaissance, what shall we say is the motto of to-day? Not *ὁὐ λίαν ποθῶ*; no creed of vague, insatiable yearning, but rather the *πάντα αὐτίκα ποθῶ* — the lust for immediate and universal possession: as who should cry,

"I want no little here below,
I want it all, and quick."

In one of his odes, Pindar, lauding the older times when the Muse had not yet learned to work for hire, breaks off "but now she biddeth us observe the saying of the Man of Argos, 'Money maketh man'" — *χρήματα, χρήματ' ἀνὴρ*. If not money, then sudden success — that is the criterion of the Man of Argos to-day.

The Bandar-log and the Argive retard the advance of scholarship in the university; and not the university alone is responsible for their presence, but the elementary school as well.

[*Note.* — There is an omission here of two sections which treat of the laxity existing in our secondary schools.]

Roger Bacon, long ago, and after him, Francis, in their quest of truth, perceived that there were four grounds of human error. Of these the first is "the false appearances that are imposed upon us by the general nature of the mind" of man. The mind is always prone to accept the affirmative or active as proof rather than the negative; so that if you hit the mark a few times you forget the many that you missed it. You worship Neptune for the numerous pictures in his temple of those that escaped shipwreck, but you omit to ask: "Where are the pictures of those that were drowned?" And because you are mentally equipped to seek uniformity, you ascribe to "Nature a greater equality and uniformity than is, in truth." In this refractory mind of man "the beams of things" do not "reflect according to their true incidence"; hence our fundamental superstitions, fallacies which Francis Bacon calls the Idols, or delusions, of the Race, or Tribe.

In matters of education the dearest delusion of our Tribe to-day is *that the university should reflect the public*. This is the idol of the Popular Voice. Once the university is joined to this idol, it is joined to all the idols of that Pantheon. It accepts the fallacy that our sons and daughters are equally gifted and zealous, and hence that each must profit by the higher education. This is the idol of Inevitable Grace; that is, of grace innate and

irresistible by which every youth is predestinated to intellectual life, "without any foresight of faith or good works, or perseverance in either of them, or any other thing in the creature, as conditions or causes moving him thereunto," or anything in the tutor. No Calvinistic favor this, by which some are chosen while others are ordained to ignorance and sloth; but a favor not contemplated in the Westminster Confession, by which all are elect and all, in due season, effectually called to learning, and quickened and renewed by the Spirit of Zeal, and so enabled to answer this call and embrace the Grace offered and conveyed in it. The university is then joined to the idol of Numbers. And of these worships the shibboleth is "mediocrity": for to raise the standard of university requirement is to discriminate between candidates, and to doubt Inevitable Grace; while to decrease the bloated registration is a sacrilege which Numbers will avenge with curtailment of prosperity. And the ritual march is by lock-step: for tests, competition, and awards are alien to the American spirit thus misrepresented — save athletic competition: that is a divine exception.

The university is next joined to the idol of Quick Returns. It accepts the fallacy of utilitarian purpose; and hence, that a profession must be chosen prematurely and immaturely entered; and hence that studies are not for discipline or intrinsic worth, but from the primary school to the Ph.D., for purely vocational value; and hence that every incipient vocation from making toy boats and paper mats to making tariffs and balloons must find its place in every school and in every grade for every man or woman child. And since the man or woman child may find perchance a vocation in the liberal arts, the child must bestride both horses, though with the usual aerial result.

And our students — they worship the idol of Incidental Issues: the fallacy that the aim of the university is deliberately to make character. As if character were worth anything without mind, and were any other, as President Wilson has wisely said, than the by-product of duty performed; or that the duty

of the student were any other than to study. They accept the fallacy that the gauge of studentship is popularity, and that popularity during academic years is to be won by hasty achievement and the babbling strenuous life, by allegiance to a perverted image of the Alma Mater, by gregariousness, by playing at citizenship. Of this popularity the outward and visible index is mundane prominence and the lightly proffered laurel of the campus.

I said that the dearest delusion of the Tribe was that the university should reflect the public. But this delusion requires also *that our universities be continually figuring in the public eye*. So far as such activity is necessary to the building up of schools, and to the education of a community to an understanding of the ideals and the needs of higher education, it is not only legitimate but laudable. But when, under the name of university extension, our universities undertake the higher education of the periphery, in dilettantism or methods of research, they run the risk of university attenuation and simulation. When, not dispassionately, they figure in public issues, they lay themselves open to the charge of partisanship. Time was when academic etiquette forbade the university professor to participate in political contests. Now there are who dare to inject the university into prejudiced affairs; even into criminal cases pending in the courts. They have joined themselves to the idol of Parade.

To this same false policy of figuring in the public eye our universities bow when they sanction amphitheatrical spectacles, at some of which money enough passes hands to build a battleship. Football is a most desirable recreation, and a moral and physical discipline of value to every able-bodied boy. Nay, more, athletics, physical sport, and emulation are necessary to spiritual health. Even excess in them is better, it has often been said, than that moral evil should abound. But is the alternative necessary? Must we have either gladiators or degenerates?

Need athletics be professionalized, be specialized? Do specialized athletics benefit the morals of the ninety and nine who don't play? Do they not rather spoil sport, detract from time and tendency to exercise for oneself? Do they not substitute hysteria for muscular development? Football is a noble game; but it is with disgust that one views its degeneration from an exhilarating pastime for all into a profession of the few, a source of newspaper notoriety, a cause of extravagance, orgiastic self-abandonment, and educational shipwreck. This comes of bowing to the idol of Parade.

The university should not adopt the idols of the community. It should set the ideals. The American university is, and ever must be, democratic. It offers education to all who can profit by it. But education itself is aristocratic — of the best and for the best. The educated are those who, having striven, are the chosen few.

Bewildered by the advance of democracy, educators not only have accepted fallacies of the Tribe, but have attempted to justify their acceptance by further fallacies of their own — based some upon a juggling with words, others upon the authority of some Pundit (living or dead), others upon individual ignorance and conceit. These are, respectively, what Bacon has called the idols of the Market-place, the idols of the Lecture-room or Theatre, the idols of the Cave.

Idols of the Market-place are fallacies proceeding from the misconception of words. Since we educators are an imitative race, many of these misconceptions have been fostered or confirmed by the influence of some great name, Rousseau, or Froebel, or Jacotot, or another; that is to say, by authority. Consequently, the idols of the Market-place are sometimes also idols of the Theatre, which is to say, of the Lecture-room, or master by whose words we swear.

“He that will write well in any tongue must follow this counsel of Aristotle, to speak as the common people speak, but think as

wise men think." From disregard of such counsel, many of our academic fallacies concerning education have arisen. We are involved in questions and differences because we have followed the false appearances of words, instead of setting down in the beginning the definitions in which as wise men we may concur. In what definition of education is it possible that wise men may concur? All will agree that education is a process: not that of play, nor yet of work, but of artistic activity. Play meanders pleasantly toward an external end of no significance. Work drives straight for an end beyond, that is pleasant because of its worth. The process of Art has an end but not beyond. Its end is in itself; and it is pleasurable in its activity because its true activity is a result. From play the artistic process differs because its end is significant; from work it differs because its end is in its activity, and because its activity possesses the pleasure of worth. It is like religion: a process continually begun, and in its incompleteness complete. Its ideal is incapable of temporal fulfillment, but still, in each moment of development, it is spiritually perfect.

Education, then, is an art — the art of the individual realizing himself as a member of a society whose tabernacle is here, but whose home is a house not built with hands. Education is the process of knowing the best, enjoying the best, producing the best in knowledge, conduct, and the arts. Realization, expression of self, physical, intellectual, social, emotional, is its means and end. It implies faith in a moral order and continuing process, of which it is itself an integral and active part.

It is remarkable with what persistency the race of educators has indulged extremes. There has been accorded from time to time an apostle of the golden mean. But his disciples have ever proceeded to the ulterior limit: among the ancients to the pole of self-culture or to the pole of uncultured service; in the Dark Ages to the ideal of the cloister or the ideal of the castle, to joyless learning or to feudal, and feminine, approval; in the Middle Ages to the bigotry of the obscurantist or the allurements

of the material; in the Renaissance to contempt of the ancients or to neo-paganism — to theological quibbles or to Castiglione, to the bonfire of vanities or the carnal songs of Lorenzo; in the Reformation to compulsory discipline or the apotheosis of natural freedom; in the succeeding age to pedantry or deportment. Still later appear Rousseau and the philanthropists with the "return to nature," the worship of individuality, the methods of coddling and play; and then Jacotot — and the equal fitness of all for higher education, the exaggeration of inductive methods, the chimerical equivalence of studies. And now has arrived the subordination of the art of pure profit, or vaudeville, or seminars for sucklings.

Always the fallacy of the extreme! — If education is not for the fit it must be for imbeciles; if not for culture, for Mammon; if not for knowledge, for power; if not of incunabula, of turbines and limericks; if not by the cat-o'-nine-tails, by gumdrops. Why the mean of a Plato or a Quintilian could not obtain — the sanity of Melanchthon or Erasmus, of Sturm or Comenius, of Milton or the Port Royal, of Pestalozzi, Friedrich Wolf, or Thomas Arnold, — Heaven only knows, which in its unscrutable purpose has permitted the race of educators, following the devices of their own heart, to go astray after idols.

To know, to feel, to do aright and best, each and all in all and each of the fields of human activity, that is the art of education.

If we exaggerate one of these functions to the neglect of the rest, our education is no longer an ideal but an idol. If, forgetting that education is an art, we try to make of it a pleasant meandering, we set up the idol of Play. If, forgetting that the activity of Art is of intrinsic value and delight, we glorify the empty means and merit of drudgery, then we have erected the idol of Pedantry: we beat the air for discipline, shuffle in and out of corners the straw of arid learning, and choke ourselves with the dust of our own sweeping. If we fix our eyes on the cash,

we bow to the tribal idol of Quick Returns. If we forget that, as an art, there is for education a progressive ideal and a law of progress, too, we bow to the idol of Caprice. We fall not only into fallacies already enumerated but into the fallacy of the equivalence of studies, the fallacy of shifting, the fallacy of dissipation. In Art each factor is in relation to the rest, and all to the whole: we proceed fatuously upon the assumption that the part *is* the whole; and therefore each part equal to each; and therefore one study as good as any other. In Art the means, which is the end, is relative, progressive: we assume comfortably that studies are independent of each other, that we can take any in any order, pass an examination and have done. In Art the end, which is the means, is absolute and self-referred and ideal: we figure that, by dissipating our energies, we shall happen to hit, here and now, the ideal. Disregarding the progressive unity of education we bow to Caprice.

The idols of the academic market-place to-day are Caprice and Quick Returns and Play, and, in unexpected corners, Pedantry, against which in reaction these three were set up. Of these, Quick Returns was borrowed from the tribe; and not alone, for of this subvention are other tribal gods too numerous to rehearse — specially Numbers and Inevitable Grace and Incidental Issues and Parade. To one or other of these false worships are due the wane of scholarship, the utilitarian tendency, the excrescence of nonacademic activities, the neglected discipline in our education at the present time.

WHAT IS A COLLEGE FOR?¹

WOODROW WILSON

It may seem singular that at this time of day and in this confident century it should be necessary to ask, What is a college for? But it has become necessary. I take it for granted that there are few real doubts concerning the question in the minds of those who look at the college from the inside and have made themselves responsible for the realization of its serious purposes; but there are many divergent opinions held concerning it by those who, standing on the outside, have pondered the uses of the college in the life of the country; and their many varieties of opinion may very well have created a confusion of counsel in the public mind.

They are, of course, entirely entitled to their independent opinions and have a right to expect that full consideration will be given what they say by those who are in fact responsible. The college is for the use of the nation, not for the satisfaction of those who administer it or for the carrying out of their private views. They may speak as experts and with a very intimate knowledge, but they also speak as servants of the country and must be challenged to give reasons for the convictions they entertain. Controversy, it may be, is not profitable in such matters, because it is so easy, in the face of opposition, to become a partisan of one's own views and exaggerate them in seeking to vindicate and establish them; but an explicit profession of faith cannot fail to clear the air, and to assist the thinking both of those who

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are responsible and of those who only look on and seek to make serviceable comment.

Why, then, should a man send his son to college when school is finished; or why should he advise any youngster in whom he is interested to go to college? What does he expect and desire him to get there? The question might be carried back and asked with regard to the higher schools also to which lads resort for preparation for college. What are they meant to get there? But it will suffice to center the question on the college. What should a lad go to college for, — for work, for the realization of a definite aim, for discipline and a severe training of his faculties, or for relaxation, for the release and exercise of his social powers, for the broadening effects of life in a sort of miniature world in which study is only one among many interests? That is not the only alternative suggested by recent discussions. They also suggest a sharp alternative with regard to the character of the study the college student should undertake. Should he seek at college a general discipline of his faculties, a general awakening to the issues and interests of the modern world, or should he, rather, seek specially and definitely to prepare himself for the work he expects to do after he leaves college, for his support and advancement in the world? The two alternatives are very different. The one asks whether the lad does not get as good a preparation for modern life by being manager of a football team with a complicated program of intercollegiate games and trips away from home as by becoming proficient in mathematics or in history and mastering the abstract tasks of the mind; the other asks whether he is not better prepared by being given the special skill and training of a particular calling or profession, an immediate drill in the work he is to do after he graduates, than by being made a master of his own mind in the more general fields of knowledge to which his subsequent calling will be related, in all probability, only as every undertaking is related to the general thought and experience of the world.

“Learning” is not involved. No one has ever dreamed of

imparting learning to undergraduates. It cannot be done in four years. To become a man of learning is the enterprise of a lifetime. The issue does not rise to that high ground. The question is merely this: do we wish college to be, first of all and chiefly, a place of mental discipline or only a school of general experience; and, if we wish it to be a place of mental discipline, of what sort do we wish the discipline to be, — a general awakening and release of the faculties, or a preliminary initiation into the drill of a particular vocation?

These are questions which go to the root of the matter. They admit of no simple and confident answer. Their roots spring out of life and all its varied sources. To reply to them, therefore, involves an examination of modern life and an assessment of the part an educated man ought to play in it, — an analysis which no man may attempt with perfect self-confidence. The life of our day is a very complex thing which no man can pretend to comprehend in its entirety.

But some things are obvious enough concerning it. There is an uncommon challenge to effort in the modern world, and all the achievements to which it challenges are uncommonly difficult. Individuals are yoked together in modern enterprise by a harness which is both new and inelastic. The man who understands only some single process, some single piece of work which he has been set to do, will never do anything else, and is apt to be deprived at almost any moment of the opportunity to do even that, because processes change, industry undergoes instant revolutions. New inventions, fresh discoveries, alterations in the markets of the world throw accustomed methods and the men who are accustomed to them out of date and use without pause or pity. The man of special skill may be changed into an unskilled laborer overnight. Moreover, it is a day in which no enterprise stands alone or independent, but is related to every other and feels changes in all parts of the globe. The men with mere skill, with mere technical knowledge, will be mere servants perpetually, and may at any time become useless ser-

vants, their skill gone out of use and fashion. The particular thing they do may become unnecessary or may be so changed that they cannot comprehend or adjust themselves to the change.

These, then, are the things the modern world must have in its trained men, and I do not know where else it is to get them if not from its educated men and the occasional self-developed genius of an exceptional man here and there. It needs, at the top, not a few, but many men with the power to organize and guide. The college is meant to stimulate in a considerable number of men what would be stimulated in only a few if we were to depend entirely upon nature and circumstance. Below the ranks of generalship and guidance, the modern world needs for the execution of its varied and difficult business a very much larger number of men with great capacity and readiness for the rapid and concentrated exertion of a whole series of faculties: planning faculties as well as technical skill, the ability to handle men as well as to handle tools and correct processes, faculties of adjustment and adaptation as well as of precise execution, — men of resource as well as knowledge. These are the athletes, the athletes of faculty, of which our generation most stands in need. All through its ranks, besides, it needs masterful men who can acquire a working knowledge of many things readily, quickly, intelligently, and with exactness, — things they had not foreseen or prepared themselves for beforehand, and for which they could not have prepared themselves beforehand. Quick apprehension, quick comprehension, quick action are what modern life puts a premium upon, — a readiness to turn this way or that and not lose force or momentum.

To me, then, the question seems to be, Shall the lad who goes to college go there for the purpose of getting ready to be a servant merely, a servant who will be nobody and who may become useless, or shall he go there for the purpose of getting ready to be a master adventurer in the field of modern opportunity?

We must expect hewers of wood and drawers of water to come out of the colleges in their due proportion, of course, but I take

it for granted that even the least gifted of them did not go to college with the ambition to be nothing more. And yet one has hardly made the statement before he begins to doubt whether he can safely take anything for granted. Part of the very question we are discussing is the ambition with which young men now go to college. It is a day when a college course has become fashionable, — but not for the purpose of learning, not for the purpose of obtaining a definite preparation for anything, — no such purpose could become *fashionable*. The clientage of our colleges has greatly changed since the time when most of the young men who resorted to them did so with a view to entering one or other of the learned professions. Young men who expect to go into business of one kind or another now outnumber among our undergraduates those who expect to make some sort of learning the basis of their work throughout life; and I dare say that they generally go to college without having made any very definite analysis of their aim and purpose in going. Their parents seem to have made as little.

The enormous increase of wealth in the country in recent years, too, has had its effect upon the colleges, — not in the way that might have been expected, — not, as yet, by changing the standard of life to any very noticeable extent or introducing luxury and extravagance and vicious indulgence. College undergraduates have usually the freshness of youth about them, out of which there springs a wholesome simplicity, and it is not easy to spoil them or to destroy their natural democracy. They make a life of their own and insist upon the maintenance of its standards. But the increase of wealth has brought into the colleges, in rapidly augmenting numbers, the sons of very rich men, and lads who expect to inherit wealth are not as easily stimulated to effort, are not as apt to form definite and serious purposes, as those who know that they must whet their wits for the struggle of life.

There was a time when the mere possession of wealth conferred distinction; and when wealth confers distinction it is apt to

breed a sort of consciousness of opportunity and responsibility in those who possess it and incline them to seek serious achievement. But that time is long past in America. Wealth is common. And, by the same token, the position of the lad who is to inherit it is a peculiarly disadvantageous one, if the standard of success is to rise above mediocrity. Wealth removes the necessity for effort, and yet effort is necessary for the attainment of distinction, and very great effort at that, in the modern world, as I have already pointed out. It would look as if the ordinary lad with expectations were foredoomed to obscurity; for the ordinary lad will not exert himself unless he must.

We live in an age in which no achievement is to be cheaply had. All the cheap achievements, open to amateurs, are exhausted and have become commonplace. Adventure, for example, is no longer extraordinary: which is another way of saying that it is commonplace. Any amateur may seek and find adventure; but it has been sought and had in all its kinds. Restless men, idle men, chivalrous men, men drawn on by mere curiosity and men drawn on by love of the knowledge that lies outside books and laboratories, have crossed the whole face of the habitable globe in search of it, ferreting it out in corners even, following its bypaths and beating its coverts, and it is nowhere any longer a novelty or distinction to have discovered and enjoyed it. The whole round of pleasure, moreover, has been exhausted time out of mind, and most of it discredited as not pleasure after all, but just an expensive counterfeit; so that many rich people have been driven to devote themselves to expense regardless of pleasure. No new pleasure, I am credibly informed, has been invented within the memory of man. For every genuine thrill and satisfaction, therefore, we are apparently, in this sophisticated world, shut in to work, to modifying and quickening the life of the age. If college be one of the highways of life and achievement, it must be one of the highways to work.

The man who comes out of college into the modern world must, therefore, have got out of it, if he has not wasted four

vitaly significant years of his life, a quickening and a training which will make him in some degree a master among men. If he has got less, college was not worth his while. To have made it worth his while he must have got such a preparation and development of his faculties as will give him movement as well as mere mechanical efficiency in affairs complex, difficult, and subject to change. The word "efficiency" has in our day the power to think at the center of it, the power of independent movement and initiative. It is not merely the suitability to be a good tool, it is the power to wield tools, and among the tools are men and circumstances and changing processes of industry, changing phases of life itself. There should be technical schools a great many and the technical schools of America should be among the best in the world. The men they train are indispensable. The modern world needs more tools than managers, more workmen than master workmen. But even the technical schools must have some thought of mastery and adaptability in their processes; and the colleges, which are not technical schools, should think of that chiefly. We must distinguish what the college is for, without disparaging any other school, of any other kind. It is for the training of the men who are to rise above the ranks.

That is what a college is for. What it does, what it requires of its undergraduates and of its teachers, should be adjusted to that conception. The very statement of the object, which must be plain to all who make any distinction at all between a college and a technical school, makes it evident that the college must subject its men to a general intellectual training which will be narrowed to no one point of view, to no one vocation or calling. It must release and quicken as many faculties of the mind as possible, — and not only release and quicken them but discipline and strengthen them also by putting them to the test of systematic labor. Work, definite, exacting, long continued, but not narrow or petty or merely rule of thumb, must be its law of life for those who would pass its gates and go out with its authentication.

By a general training I do not mean vague spaces of study, miscellaneous fields of reading, a varied smattering of a score of subjects and the thorough digestion of none. The field of modern knowledge is extremely wide and varied. After a certain number of really fundamental subjects have been studied in the schools, the college undergraduate must be offered a choice of the route he will travel in carrying his studies further. He cannot be shown the whole body of knowledge within a single curriculum. There is no longer any single highway of learning. The roads that traverse its vast and crowded spaces are not even parallel, and four years is too short a time in which to search them all out. But there is a general program still possible by which the college student can be made acquainted with the field of modern learning by sample, by which he can be subjected to the several kinds of mental discipline, — in philosophy, in some one of the great sciences, in some one of the great languages which carry the thought of the world, in history and in politics, which is its framework, — which will give him valid naturalization as a citizen of the world of thought, the world of educated men, — and no smatterer merely, able barely to spell its constitution out, but a man who has really comprehended and made use of its chief intellectual processes and is ready to lay his mind alongside its tasks with some confidence that he can master them and can understand why and how they are to be performed. This is the general training which should be characteristic of the college, and the men who undergo it ought to be made to undergo it with deep seriousness and diligent labor; not as soft amateurs with whom learning and its thorough tasks are side interests merely, but as those who approach life with the intention of becoming professionals in its fields of achievement.

Just now, where this is attempted, it seems to fail of success. College men, it is said, and often said with truth, come out undisciplined, untrained, unfitted for what they are about to undertake. It is argued, therefore, that what they should have

been given was special vocational instruction; that if they had had that they would have been interested in their work while they were undergraduates, would have taken it more seriously, and would have come out of college ready to be used, as they now cannot be. No doubt that is to be preferred to a scattered and aimless choice of studies, and no doubt what the colleges offer is miscellaneous and aimless enough in many cases; but, at best, these are very hopeful assumptions on the part of those who would convert our colleges into vocational schools. They are generally put forward by persons who do not know how college life and work are now organized and conducted. I do not wonder that they know little of what has happened. The whole thing is of very recent development, at any rate in its elaborate complexity. It is a growth, as we now see it, of the last ten or twelve years; and even recent graduates of our colleges would rub their eyes incredulously to see it if they were to stand again on the inside and look at it intimately.

What has happened is, in general terms, this: that the work of the college, the work of its classrooms and laboratories, has become the merely formal and compulsory side of its life, and that a score of other things, lumped under the term "undergraduate activities," have become the vital, spontaneous, absorbing realities for nine out of every ten men who go to college. These activities embrace social, athletic, dramatic, musical, literary, religious, and professional organizations of every kind, besides many organized for mere amusement and some, of great use and dignity, which seek to exercise a general oversight and sensible direction of college ways and customs. Those which consume the most time are, of course, the athletic, dramatic, and musical clubs, whose practices, rehearsals, games, and performances fill the term time and the brief vacations alike. But it is the social organizations into which the thought, the energy, the initiative, the enthusiasm of the largest number of men go, and go in lavish measure.

The chief of these social organizations are residential families,

— fraternities, clubs, groups of housemates of one kind or another, — in which, naturally enough, all the undergraduate interests, all the undergraduate activities of the college have their vital center. The natural history of their origin and development is very interesting. They grew up very normally. They were necessary because of what the college did not do.

Every college in America, at any rate every college outside a city, has tried to provide living rooms for its undergraduates, dormitories in which they can live and sleep and do their work outside the classroom and the laboratory. Very few colleges whose numbers have grown rapidly have been able to supply dormitories enough for all their students, and some have deliberately abandoned the attempt, but in many of them a very considerable proportion of the undergraduates live on the campus, in college buildings. It is a very wholesome thing that they should live thus under the direct influence of the daily life of such a place and, at least in legal theory, under the authority of the university of which the college forms a principal part. But the connection between the dormitory life and the real life of the university, its intellectual tasks and disciplines, its outlook upon the greater world of thought and action which lies beyond, far beyond, the boundaries of campus and classroom, is very meager and shadowy indeed. It is hardly more than atmospheric and the atmosphere is very attenuated, perceptible only by the most sensitive.

Formerly, in more primitive, and I must say less desirable, days than these in which we have learned the full vigor of freedom, college tutors and proctors lived in the dormitories and exercised a precarious authority. The men were looked after in their rooms and made to keep hours and observe rules. But these days are happily gone by. The system failed of its object. The lads were mischievous and recalcitrant, those placed in authority over them generally young and unwise; and the rules were odious to those whom they were meant to restrain. There was the atmosphere of the boarding-school about the buildings,

and of a boarding-school whose pupils had outgrown it. Life in college dormitories is much pleasanter now and much more orderly, because it is free and governed only by college opinion, which is a real, not a nominal, master. The men come and go as they please and have little consciousness of any connection with authority or with the governing influences of the university in their rooms, except that the university is their landlord and makes rules such as a landlord may make.

Formerly, in more primitive and less pleasant days, the college provided a refectory or "commons" where all undergraduates had their meals, a noisy family. It was part of the boarding-school life; and the average undergraduate had outgrown it as consciously as he had outgrown the futile discipline of the dormitory. Now nothing of the kind is attempted. Here and there, in connection with some large college which has found that the boarding-houses and restaurants of the town have been furnishing poor food at outrageous prices to those of its undergraduates who could not otherwise provide for themselves, will be found a great "commons," at which hundreds of men take their meals, amid the hurly-burly of numbers, without elegance or much comfort, but nevertheless at a well-spread table where the food is good and the prices moderate. The undergraduate may use it or not as he pleases. It is merely a great coöperative boarding-place, bearing not even a family resemblance to the antique "commons." It is one of the conveniences of the place. It has been provided by the university authorities, but it might have been provided in some other way and have been quite independent of them; and it is usually under undergraduate management.

Those who do not like the associations or the fare of such a place provide for themselves elsewhere, in clubs or otherwise, — generally in fraternity houses. At most colleges there is no such common boarding-place, and all must shift for themselves. It is this necessity in the one case and desire in the other that has created the chief complexity now observable in college life

and which has been chiefly instrumental in bringing about that dissociation of undergraduate life from the deeper and more permanent influence of the university which has of recent years become so marked and so significant.

Fraternity chapters were once — and that not so very long ago — merely groups of undergraduates who had bound themselves together by the vows of various secret societies which had spread their branches among the colleges. They had their fraternity rooms, their places of meeting; they were distinguished by well-known badges and formed little coteries distinguishable enough from the general body of undergraduates, as they wished to be; but in all ordinary matters they shared the common life of the place. The daily experiences of the college life they shared with their fellows of all kinds and all connections, in an easy democracy; their contacts were the common contacts of the classroom and the laboratory not only, but also of the boarding-house table and of all the usual undergraduate resorts. Members of the same fraternity were naturally enough inclined to associate chiefly with one another, and were often, much too often, inclined, in matters of college “politics,” to act as a unit and in their own interest; but they did not live separately. They did not hold aloof or constitute themselves separate families, living apart in their own houses, in privacy. Now all that is changed. Every fraternity has its own house, equipped as a complete home. The fraternity houses will often be the most interesting and the most beautiful buildings a visitor will be shown when he visits the college. In them members take all their meals, in them they spend their leisure hours and often do their reading, — for each house has its library, — and in them many of the members, as many as can be accommodated, have their sleeping rooms and live, because the college has not dormitories enough to lodge them or because they prefer lodging outside the dormitories. In colleges where there are no fraternities, clubs of one sort or another take their places, build homes of their own, enjoy a similar privacy

and separateness, and constitute the center of all that is most comfortable and interesting and attractive in undergraduate life.

I am pointing out this interesting and very important development, not for the purpose of criticising it, but merely to explain its natural history and the far-reaching results it has brought about. The college having determined, wisely enough, some generation or two ago, not to be any longer a boarding-school, has resolved itself into a mere teaching machine, with the necessary lecture rooms and laboratories attached and sometimes a few dormitories, which it regards as desirable but not indispensable, and has resigned into the hands of the undergraduates themselves the whole management of their life outside the classroom; and not only its management but also the setting up of all its machinery of every kind, — as much as they please, — and the constitution of its whole environment, so that teachers and pupils are not members of one university body but constitute two bodies sharply distinguished, — and the undergraduate body the more highly organized and independent of the two. They parley with one another, but they do not live with one another, and it is much easier for the influence of the highly organized and very self-conscious undergraduate body to penetrate the faculty than it is for the influence of the faculty to permeate the undergraduates.

It was inevitable it should turn out so in the circumstances. I do not wonder that the consequences were not foreseen and that the whole development has crept upon us almost unawares. But the consequences have been very important and very far-reaching. It is easy now to see that if you leave undergraduates entirely to themselves, to organize their own lives while in college as they please, — and organize it in some way they must if thus cast adrift, — that life, and not the deeper interests of the university, will presently dominate their thoughts, their imaginations, their favorite purposes. And not only that. The work of administering this complex life, with all its organiza-

tions and independent interests, successfully absorbs the energies, the initiative, the planning and originating powers of the best men among the undergraduates. It is no small task. It would tax and absorb older men; and only the finer, more spirited, more attractive, more original and effective men are fitted for it or equal to it, where leadership goes by gifts of personality as well as by ability. The very men the teacher most desires to get hold of and to enlist in some enterprise of the mind, the very men it would most reward him to instruct and whose training would count for most in leadership outside of college, in the country at large, and for the promotion of every interest the nation has, the natural leaders and doers, are drawn off and monopolized by these necessary and engaging undergraduate undertakings. The born leaders and managers and originators are drafted off to "run the college" (it is in fact nothing less), and the classroom, the laboratory, the studious conference with instructors get only the residuum of their attention, only what can be spared of their energy — are secondary matters where they ought to come first. It is the organization that is at fault, not the persons who enter into it and are molded by it. It cannot turn out otherwise in the circumstances. The side shows are so numerous, so diverting, — so important, if you will, — that they have swallowed up the circus, and those who perform in the main tent must often whistle for their audiences, discouraged and humiliated.

Such is college life nowadays, and such its relation to college work and the all important intellectual interests which the colleges are endowed and maintained to foster. I need not stop to argue that the main purposes of education cannot be successfully realized under such conditions. I need not stop to urge that the college was not and can never be intended for the uses it is now being put to. A young man can learn to become the manager of a football team or of a residential club, the leader of an orchestra or a glee club, the star of amateur theatricals, an oarsman or a chess player without putting himself to the trouble

or his parents to the expense of four years at a college. These are innocent enough things for him to do and to learn, though hardly very important in the long run; they may, for all I know, make for efficiency in some of the simpler kinds of business; and no wise man who knows college lads would propose to shut them off from them or wish to discourage their interest in them. All work and no play makes Jack a dull boy, not only, but may make him a vicious boy as well. Amusement, athletic games, the zest of contest and competition, the challenge there is in most college activities to the instinct of initiative and the gifts of leadership and achievement, — all these are wholesome means of stimulation, which keep young men from going stale and turning to things that demoralize. But they should not assume the front of the stage where more serious and lasting interests are to be served. Men cannot be prepared by them for modern life.

The college is meant for a severer, more definite discipline than this: a discipline which will fit men for the contests and achievements of an age whose every task is conditioned upon some intelligent and effective use of the mind, upon some substantial knowledge, some special insight, some trained capacity, some penetration which comes from study, not from natural readiness or mere practical experience. /

The side shows need not be abolished. They need not be cast out or even discredited. But they must be subordinated. They must be put in their natural place as diversions, and ousted from their present dignity and preëminence as occupations.

And this can be done without making of the college again a boarding-school. The characteristic of the boarding-school is that its pupils are in all things in tutelage, are under masters at every turn of their life, must do as they are bidden, not in the performance of their set tasks only, but also in all their comings and goings. It is this characteristic that made it impossible and undesirable to continue the life of the boarding-school into the college, where it is necessary that the pupil

should begin to show his manhood and make his own career. No one who knows what wholesome and regulated freedom can do for young men ought ever to wish to hail them back to the days of childish discipline and restraint of which the college of our grandfathers was typical. But a new discipline is desirable, is absolutely necessary, if the college is to be recalled to its proper purpose, its bounden duty. It cannot perform its duty as it is now organized.

The fundamental thing to be accomplished in the new organization is that, instead of being the heterogeneous congeries of petty organizations it now is, instead of being allowed to go to pieces in a score of fractions free to cast off from the whole as they please, it should be drawn together again into a single university family of which the teachers shall be as natural and as intimate members as the undergraduates. The "life" of the college should not be separated from its chief purposes and most essential objects, should not be contrasted with its duties and in rivalry with them. The two should be but two sides of one and the same thing; the association of men, young and old, for serious mental endeavor and also, in the intervals of work, for every wholesome sport and diversion. Undergraduate life should not be in rivalry and contrast with undergraduate duties: undergraduates should not be merely in attendance upon the college, but parts of it on every side of its life, very conscious and active parts. They should consciously live its whole life, — not under masters, as in school, and yet associated in some intimate daily fashion with their masters in learning: so that learning may not seem one thing and life another. The organizations whose objects lie outside study should be but parts of the whole, not set against it, but included within it.

All this can be accomplished by a comparatively simple change of organization which will make master and pupil members of the same free, self-governed family, upon natural terms of intimacy. But how it can be done is not our present interest. That is another story. It is our present purpose merely to be

clear what a college is for. That, perhaps, I have now pointed out with sufficient explicitness. I have shown the incompatibility of the present social organization of our colleges with the realization of that purpose only to add emphasis to the statement of what that purpose is. Once get that clearly established in the mind of the country, and the means of realizing it will readily and quickly enough be found. The object of the college is intellectual discipline and moral enlightenment, and it is the immediate task of those who administer the colleges of the country to find the means and the organization by which that object can be attained. Education is a process, and, like all other processes, has its proper means and machinery. It does not consist in courses of study. It consists of the vital assimilation of knowledge, and the mode of life, for the college as for the individual, is nine parts of the digestion.

OF KINGS' TREASURIES¹

JOHN RUSKIN

ALL books are divisible into two classes, — the books of the hour and the books of all time. Mark this distinction; it is not one of quality only. It is not merely the bad book that does not last, and the good one that does; it is a distinction of species. There are good books for the hour, and good ones for all time; bad books for the hour, and bad ones for all time. I must define the two kinds before I go farther.

The good book of the hour, then, — I do not speak of the bad ones, — is simply the useful or pleasant talk of some person whom you cannot otherwise converse with, printed for you. Very useful often, telling you what you need to know; very pleasant often, as a sensible friend's present talk would be. These bright accounts of travels; good-humored and witty discussions of question; lively or pathetic story-telling in the form of novel; firm fact-telling, by the real agents concerned in the events of passing history; all these books of the hour, multiplying among us as education becomes more general, are a peculiar possession of the present age. We ought to be entirely thankful for them, and entirely ashamed of ourselves if we make no good use of them. But we make the worst possible use if we allow them to usurp the place of true books; for, strictly speaking, they are not books at all, but merely letters or newspapers in good print. Our friend's letter may be delightful or necessary to-day, — whether worth keeping or not, is to be considered. The newspaper may be entirely proper at breakfast-time, but assuredly it is not reading for all day; so, though

¹ Reprinted from *Sesame and Lilies*. A part of the essay is here omitted.

bound up in a volume, the long letter which gives you so pleasant an account of the inns and roads and weather last year at such a place, or which tells you that amusing story, or gives you the real circumstances of such and such events, however valuable for occasional reference, may not be in the real sense of the word a "book" at all, nor, in the real sense, to be "read." A book is essentially not a talked thing, but a written thing, and written not with a view of mere communication, but of permanence. The book of talk is printed because its author cannot speak to thousands of people at once; if he could he would, — the volume is mere *multiplication* of his voice. You cannot talk to your friend in India; if you could, you would. You write instead; that is mere *conveyance* of voice. But a book is written, not to multiply the voice merely, not to carry it merely, but to perpetuate it. The author has something to say which he perceives to be true and useful, or helpfully beautiful. So far as he knows, no one has yet said it; so far as he knows, no one else can say it. He is bound to say it clearly and melodiously if he may; clearly, at all events. In the sum of his life he finds this to be the thing or group of things manifest to him, — this, the piece of true knowledge or sight which his share of sunshine and earth has permitted him to seize. He would fain set it down forever, engrave it on rock if he could, saying, "This is the best of me; for the rest, I ate and drank and slept, loved and hated, like another. My life was as the vapor, and is not; but this I saw and knew, — this, if anything of mine, is worth your memory." This is his "writing"; it is in his small human way, and with whatever degree of true inspiration is in him, his inscription or scripture. That is a "Book." . . .

Now, books of this kind have been written in all ages by their greatest men, — by great readers, great statesmen, and great thinkers. These are all at your choice; and Life is short. You have heard as much before; yet have you measured and mapped out this short life and its possibilities? Do you know, if you read this, that you cannot read that; that what you lose

to-day you cannot gain to-morrow? Will you go and gossip with your housemaid or your stable-boy, when you may talk with queens and kings; or flatter yourselves that it is with any worthy consciousness of your own claims to respect that you jostle with the hungry and common crowd for *entrée* here, and audience there, when all the while this eternal court is open to you, with its society, wide as the world, multitudinous as its days, — the chosen and the mighty of every place and time? Into that you may enter always; in that you may take fellowship and rank according to your wish; from that, once entered into it, you can never be an outcast but by your own fault; by your aristocracy of companionship there, your own inherent aristocracy will be assuredly tested, and the motives with which you strive to take high place in the society of the living, measured, as to all the truth and sincerity that are in them, by the place you desire to take in this company of the dead.

“The place you desire,” and the place *you fit yourself for*, I must also say, because, observe, this court of the past differs from all living aristocracy in this, — it is open to labor and to merit, but to nothing else. No wealth will bribe, no name overawe, no artifice deceive, the guardian of those Elysian gates. In the deep sense, no vile or vulgar person ever enters there. At the portières of that silent Faubourg St. Germain, there is but brief question: “Do you deserve to enter? Pass. Do you ask to be the companion of nobles? Make yourself noble, and you shall be. Do you long for the conversation of the wise? Learn to understand it, and you shall hear it. But on other terms? — No. If you will not rise to us, we cannot stoop to you. The living lord may assume courtesy, the living philosopher explain his thought to you with considerate pain; but here we neither feign nor interpret. You must rise to the level of our thoughts if you would be gladdened by them, and share our feelings if you would recognize our presence.”

This, then, is what you have to do, and I admit that it is much. You must, in a word, love these people, if you are to be among

them. No ambition is of any use. They scorn your ambition. You must love them, and show your love . . . by a true desire to be taught by them, and to enter into their thoughts. To enter into theirs, observe, not to find your own expressed by them. If the person who wrote the book is not wiser than you, you need not read it; if he be, he will think differently from you in many respects.

Very ready we are to say of a book, "How good this is, — that's exactly what I think!" But the right feeling is, "How strange that is! I never thought of that before, and yet I see it is true; or if I do not now, I hope I shall some day." But whether thus submissively or not, at least be sure that you go to the author to get at *his* meaning, not to find yours. Judge it afterward if you think yourself qualified to do so; but ascertain it first. And be sure also, if the author is worth anything, that you will not get at his meaning all at once, — nay, that at his whole meaning you will not for a long time arrive in any wise. Not that he does not say what he means, and in strong words too; but he cannot say it all, and what more strange, *will* not, but in a hidden way and in parable, in order that he may be sure you want it. I cannot quite see the reason of this, nor analyze that cruel reticence in the breasts of men which makes them always hide their deeper thought. They do not give it you by way of help, but of reward, and will make themselves sure that you deserve it before they allow you to reach it. But it is the same with the physical type of wisdom, gold. There seems, to you and me, no reason why the electric forces of the earth should not carry whatever there is of gold within it at once to the mountain-tops; so that kings and people might know that all the gold they could get was there, and without any trouble of digging, or anxiety, or chance, or waste of time, cut it away, and coin as much as they needed. But Nature does not manage it so. She puts it in little fissures in the earth, nobody knows where; you may dig long and find none; you must dig painfully to find any.

And it is just the same with men's best wisdom. When you come to a good book, you must ask yourself, "Am I inclined to work as an Australian miner would? Are my pickaxes and shovels in good order, and am I in good trim, myself, my sleeves well up to the elbow, and my breath good, and my temper?" And keeping the figure a little longer, even at a cost of tiresomeness, for it is a thoroughly useful one, the metal you are in search of being the author's mind or meaning, his words are as the rock which you have to crush and smelt in order to get at it. And your pickaxes are your own care, wit, and learning; your smelting furnace is your own thoughtful soul. Do not hope to get at any good author's meaning without those tools and that fire; often you will need sharpest, finest chiseling and patientest fusing, before you can gather one grain of the metal.

ON JARGON¹

ARTHUR QUILLER-COUCH

WE parted, Gentlemen, upon a promise to discuss the capital difficulty of Prose, as we have discussed the capital difficulty of Verse. But, although we shall come to it, on second thoughts I ask leave to break the order of my argument and to interpose some words upon a kind of writing which, from a superficial likeness, commonly passes for prose in these days, and by lazy folk is commonly written for prose, yet actually is not prose at all; my excuse being the simple practical one that, by first clearing this sham prose out of the way, we shall the better deal with honest prose when we come to it. The proper difficulties of prose will remain; but we shall be agreed in understanding what it is, or at any rate what it is not, that we talk about. I remember to have heard somewhere of a religious body in the United States of America which had reason to suspect one of its churches of accepting spiritual consolation from a colored preacher — an offense against the laws of the Synod — and dispatched a Disciplinary Committee with power to act; and of the Committee's returning to report itself unable to take any action under its terms of reference, for that while a person undoubtedly colored had undoubtedly occupied the pulpit and had audibly spoken from it in the Committee's presence, the performance could be brought within no definition of preaching known or discoverable. So it is with that infirmity of speech — that flux, that determination of words to the mouth, or to the pen — which, though it be familiar to you in parliamentary

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debates, in newspapers, and as the staple language of Blue Books, Committees, Official Reports, I take leave to introduce to you as prose which is not prose and under its real name of Jargon.

You must not confuse this Jargon with what is called Journalese. The two overlap, indeed, and have a knack of assimilating each other's vices. But Jargon finds, maybe, the most of its votaries among good douce people who have never written to or for a newspaper in their life, who would never talk of "adverse climatic conditions" when they mean "bad weather"; who have never trifled with verbs such as "obsess," "recrudesce," "envisage," "adumbrate," or with phrases such as "the psychological moment," "the true inwardness," "it gives furiously to think." It dallies with Latinity — "sub silentio," "de die in diem," "cui bono?" (always in the sense, unsuspected by Cicero, of "What is the profit?") — but not for the sake of style. Your journalist at the worst is an artist in his way; he daubs paint of this kind upon the lily with a professional zeal; the more flagrant (or, to use his own word, arresting) the pigment, the happier is his soul. Like the Babu he is trying all the while to embellish our poor language, to make it more floriferous, more poetical — like the Babu for example who, reporting his mother's death, wrote, "Regret to inform you, the hand that rocked the cradle has kicked the bucket."

There is metaphor; *there* is ornament; *there* is a sense of poetry, though as yet groping in a world unrealized. No such gusto marks — no such zeal, artistic or professional, animates — the practitioners of Jargon, who are, most of them (I repeat), douce respectable persons. Caution is its father; the instinct to save everything and especially trouble; its mother, Indolence. It looks precise, but is not. It is, in these times, *safe*: a thousand men have said it before and not one to your knowledge had been prosecuted for it. And so, like respectability in Chicago, Jargon stalks unchecked in our midst. It is becoming the language of Parliament; it has become the medium through which Boards

of Government, County Councils, Syndicates, Committees, Commercial Firms, express the processes as well as the conclusions of their thought and so voice the reason of their being.

Has a Minister to say "No" in the House of Commons? Some men are constitutionally incapable of saying no; but the Minister conveys it thus "The answer to the question is in the negative." That means "no." Can you discover it to mean anything less, or anything more except that the speaker is a pompous person? — which was no part of the information demanded.

That is Jargon, and it happens to be accurate. But as a rule Jargon is by no means accurate, its method being to walk circumspectly around its target; and its faith, that having done so it has either hit the bull's-eye or at least achieved something equivalent, and safer.

Thus the clerk of a Board of Guardians will minute that —

"In the case of John Jenkins deceased, the coffin provided was of the usual character."

Now this is not accurate. "In the case of John Jenkins deceased," for whom a coffin was supplied, it is wholly superfluous to tell us that he is deceased. But actually John Jenkins never had more than one case, and that was the coffin. The clerk says he had two, — a coffin in a case; but I suspect the clerk to be mistaken, and I am sure he errs in telling us that the coffin was of the usual character; for coffins have no character, usual or unusual.

For another example (I shall not tell you whence derived) —

In the case of every candidate who is placed in the first class [So you see the lucky fellow gets a case as well as a first-class. He might be a stuffed animal: perhaps he is] — In the case of every candidate who is placed in the first class the class-list will show by some convenient mark (1) the Section or Sections for proficiency in which he is placed in the first class and (2) the Section or Sections (if any) in which he has passed with special distinction.

"The Section or Sections (if any)" — But how, if they are not any, could they be indicated by a mark however convenient?

The Examiners will have regard to the style and method of the candidate's answers, and will give credit for excellence in *these respects*.

Have you begun to detect the two main vices of Jargon? The first is that it uses circumlocution rather than short straight speech. It says: "In the case of John Jenkins deceased, the coffin" when it means "John Jenkins's coffin"; and its yea is not yea, neither is its nay nay; but its answer is in the affirmative or in the negative, as the foolish and superfluous "case" may be. The second vice is that it habitually chooses vague, woolly, abstract nouns rather than concrete ones. I shall have something to say by and by about the concrete noun, and how you should ever be struggling for it whether in prose or in verse. For the moment I content myself with advising you, if you would write masculine English, never to forget the old tag of your Latin Grammar —

Masculine will only be
Things that you can touch and see.

But since these lectures are meant to be a course in First Aid to writing, I will content myself with one or two extremely rough rules; yet I shall be disappointed if you do not find them serviceable.

The first is: Whenever in your reading you come across one of these words, *case, instance, character, nature, condition, persuasion, degree*, — whenever in writing your pen betrays you to one or another of them, — pull yourself up and take thought. If it be "case" (I choose it as Jargon's dearest child — "in Heaven yclept Metonymy"), turn to the dictionary, if you will, and seek out what meaning can be derived from *casus*, its Latin ancestor; then try how, with a little trouble, you can extricate yourself from that case. The odds are you will feel like a butterfly who has discarded his chrysalis.

Here are some specimens to try your hand on:

(1) All those tears which inundated Lord Cecil's head were dry in the case of Mr. Harold Cox.

Poor Mr. Cox! left gasping in his aquarium!

(2) [From a cigar-merchant.] In any case, let us send you a case on approval.

(3) It is contended that Consols have fallen in consequence; but such is by no means the case.

"*Such*," by the way, is another spoilt child of Jargon, especially in Committee's Rules — "Coöpted members may be eligible as such; such members to continue to serve for such time as " — and so on.

(4) Even in the purely Celtic areas only in two or three cases do the Bishops bear Celtic names.

For "cases" read "dioceses."

Instance. In most instances the players were below their form.

But what were they playing at? Instances?

Character — Nature. There can be no doubt that the accident was caused through the dangerous nature of the spot, the hidden character of the by-road, and the utter absence of any warning or danger signal.

Mark the foggy wording of it all! And yet the man hit something and broke his neck! Contrast that explanation with the verdict of a coroner's jury in the west of England on a drowned postman: "We find that deceased met his death by an act of God, caused by sudden overflowing of the river Walkham and helped out by the scandalous neglect of the way-wardens."

The Aintree course is notoriously of a trying nature.

On account of its light character, purity, and age, Usher's whiskey is a whiskey — that will agree with you.

Order. The mésalliance was of a pronounced order.

Condition. He was conveyed to his place of residence in an intoxicated condition.

"He was carried home drunk."

Quality and Section. Mr. —, exhibiting no less than five works, all of a superior quality, figures prominently in the oil section.

This was written of an exhibition of pictures.

Degree. A singular degree of rarity prevails in the earlier editions of this romance.

That is Jargon. In prose it runs simply "The earlier editions of this romance are rare" — or "are very rare" — or even (if you believe what I take leave to doubt) "are singularly rare"; which should mean that they are rarer than the editions of any other work in the world.

Now what I ask you to consider about these quotations is that in each the writer was using Jargon to shirk prose, palming off periphrases upon us when with a little trouble he could have gone straight to the point. "A singular degree of rarity prevails," "the accident was caused through the dangerous nature of the spot," "but such is by no means the case." We may not be capable of much; but we can all write better than that, if we take a little trouble. In place of "the Aintree course is of a trying nature," we can surely say "Aintree is a trying course" or "the Aintree course is a trying one" — just that and nothing more.

Next, having trained yourself to keep a lookout for these worst offenders (and you will be surprised to find how quickly you get into the way of it), proceed to push your suspicions out among the whole cloudy host of abstract terms. "How excellent a thing is sleep," sighed Sancho Panza; "it wraps a man round like a cloak" — an excellent example, by the way, of how to say a thing concretely; a Jargoneer would have said that "among the beneficent qualities of sleep its capacity for withdrawing the human consciousness from the contemplation of immediate circumstances may perhaps be accounted not the least remarkable." How vile a thing — shall we say? — is the abstract noun! It wraps a man's thoughts round like cotton wool.

Here is a pretty little nest of specimens, found in *The Times*

newspaper by Messrs. H. W. and F. G. Fowler, authors of that capital little book, *The King's English*:

One of the most important reforms mentioned in the rescript is the unification of the organization of judicial institutions and the guarantee for all the tribunals of the independence necessary for securing to all classes of the community equality before the law.

I do not dwell on the cacophony; but, to convey a straightforward piece of news, might not the editor of *The Times* as well employ a man to write:

One of the most important reforms is that of the Courts, which need a uniform system and to be made independent. In this way only can men be assured that all are equal before the law.

I think he might.

A day or two ago the musical critic of the *Standard* wrote this:

MR. LAMOND IN BEETHOVEN

Mr. Frederick Lamond, the Scottish pianist, as an interpreter of Beethoven has few rivals. At this second recital of the composer's works at Bechstein Hall on Saturday afternoon he again displayed a complete sympathy and understanding of his material that extracted the very essence of æsthetic and musical value from each selection he undertook. The delightful intimacy of his playing and his unusual force of individual expression are invaluable assets, which, allied to his technical brilliancy, enable him to achieve an artistic triumph. The two lengthy Variations in E flat major (Op. 35) and in D major, the latter on the Turkish March from *The Ruins of Athens*, when included in the same program, require a master hand to provide continuity of interest. To say that Mr. Lamond successfully avoided moments that might at times, in these works, have inclined to comparative disinterestedness, would be but a moderate way of expressing the remarkable fascination with which his versatile playing endowed them, but at the same time two of the sonatas given included a similar form of composition, and no matter how intellectually brilliant may be the interpretation, the extravagant use of a certain mode is bound in time to become somewhat ineffective. In the Three Sonatas, the E major (Op. 109), the A major (Op. 2), No. 2, and the C minor (Op. 111), Mr. Lamond signalized his perfect insight into the composer's varying moods.

Will you not agree with me that here is no writing, here is no prose, here is not even English, but merely a flux of words to the pen?

Here again is a string, a concatenation — say, rather, a tiara of gems of purest ray serene from the dark, unfathomed caves of a Scottish newspaper:

The Chinese viewpoint, as indicated in this letter, may not be without interest to your readers, because it evidently is suggestive of more than an academic attempt to explain an unpleasant aspect of things which, if allowed to materialize, might suddenly culminate in disaster resembling the Chang-Sha riots. It also ventures to illustrate incidents having their inception in recent premature endeavors to accelerate the development of Protestant missions in China; but we would hope for the sake of the interests involved that what my correspondent describes as "the irresponsible ruffian element" may be known by their various religious designations only within very restricted areas.

Well, the Chinese have given it up, poor fellows! and are asking the Christians — as to-day's newspapers inform us — to pray for them. Do you wonder? But that is, or was, the Chinese "viewpoint," — and what a willow-pattern viewpoint! Observe its delicacy. It does not venture to interest or be interesting; merely "to be not without interest." But it does "venture to illustrate incidents" — which, for a viewpoint, is brave enough; and this illustration "is suggestive of something more than an academic attempt to explain an unpleasant aspect of things which, if allowed to materialize, might suddenly culminate." *What* materializes? The unpleasant aspect? or the things? Grammar says the "things," "things which allowed to materialize." But things are materialized already, and as a condition of their being things. It must be the aspect, then, that materializes. But, if so, it is also the aspect that culminates, and an aspect, however unpleasant, can hardly do that, or at worst cannot culminate in anything resembling the Chang-Sha riots. . . . I give it up.

Let us turn to another trick of Jargon — the trick of *Elegant Variation*, so rampant in the sporting press that there, without needing to attend these lectures, the undergraduate detects it for laughter: —

Hayward and C. B. Fry now faced the bowling, which apparently had no terrors for the Surrey crack. The old Oxonian, however, took some time in settling to work. . . .

Yes, you all recognize it and laugh at it. But why do you practice it in your essays? An undergraduate brings me an essay on Byron. In an essay on Byron, Byron is (or ought to be) mentioned many times. I expect, nay exact, that Byron shall be mentioned again and again. But my undergraduate has a blushing sense that to call Byron Byron twice on one page is indelicate. So Byron, after starting bravely as Byron, in the second sentence turns into "that great but unequal poet" and thenceforward I have as much trouble with Byron as ever Telemachus with Proteus to hold and pin him back to his proper self. Halfway down the page he becomes "the gloomy master of Newstead"; overleaf he is reincarnated into "the meteoric darling of society"; and so proceeds through successive avatars — "this arch-rebel," "the author of *Childe Harold*," "the apostle of scorn," "the ex-Harrobian, proud, but abnormally sensitive of his club-foot," "the martyr of Missolonghi," "the pageant-monger of a bleeding heart." Now this again is jargon. It does not, as most jargon does, come of laziness; but it comes of timidity, which is worse. In literature as in life he makes himself felt who not only calls a spade a spade but has the pluck to double spades and redouble.

For another rule — just as rough and ready, but just as useful: Train your suspicions to bristle up whenever you come upon "as regards," "with regard to," "in respect of," "in connection with," "according as to whether," and the like. They all are dodges of jargon, circumlocutions for evading this or that simple statement; and I say that it is not enough to avoid them nine

times out of ten, or nine-and-ninety times out of a hundred. You should never use them. That is positive enough, I hope? Though I cannot admire his style, I admire the man who wrote to me, "Re Tennyson — your remarks anent his *In Memoriam* make me sick"; for though *re* is not a preposition of the first water, and "anent" has enjoyed its day, the finish crowned the work. But here are a few specimens far, very far, worse: —

The special difficulty in Professor Minocelsi's case [our old friend "case" again] arose *in connection with* the view he holds *relative to* the historical value of the opening pages of Genesis.

That is jargon. In prose, even taking the miserable sentence as it stands constructed, we should write "the difficulty arose over the views he holds about the historical value," etc.

From a popular novelist: —

I was entirely indifferent *as to* the results of the game, caring nothing at all *as to* whether *I had losses or gains* —

Cut out the first "as" in "as to," and the second "as to" altogether, and the sentence begins to be prose. "I was indifferent to the results of the game, caring nothing whether I had losses or gains."

But why, like Dogberry, have "had losses"? Why not simply "lose"? Let us try again. "I was entirely indifferent to the results of the game, caring nothing at all whether I won or lost."

Still the sentence remains absurd; for the second clause but repeats the first without adding one jot. For if you care not at all whether you win or lose, you must be entirely indifferent to the results of the game. So why not say, "I was careless if I won or lost," and have done with it?

A man of simple and charming character, he was fitly *associated with* the distinction of the Order of Merit.

I take this gem with some others from a collection made three years ago, by the *Oxford Magazine*; and I hope you admire it as one beyond price. "He was associated with the distinc-

tion of the Order of Merit" means "he was given the Order of Merit." If the members of that Order make a society, then he was associated with them; but you cannot associate a man with a distinction. The inventor of such fine writing would doubtless have answered Canning's Needy Knife-grinder with: —

I associate thee with sixpence! I will see thee in another association first!

But let us close our *florilegium* and attempt to illustrate jargon by the converse method of taking a famous piece of English (say Hamlet's soliloquy) and remolding a few lines of it in this fashion: —

To be, or the contrary? Whether the former or the latter be preferable would seem to admit of some difference of opinion; the answer in the present case being of an affirmative or of a negative character according as to whether one elects on the one hand to mentally suffer the disfavor of fortune, albeit in an extreme degree, or on the other to boldly envisage adverse conditions in the prospect of eventually bringing them to a conclusion. The condition of sleep is similar to, if not indistinguishable from, that of death; and with the addition of finality the former might be considered identical with the latter: so that in this connection it might be argued with regard to sleep that, could the addition be effected, a termination would be put to the endurance of a multiplicity of inconveniences, not to mention a number of downright evils incidental to our fallen humanity, and thus a consummation achieved of a most gratifying nature.

That is jargon; and to write jargon is to be perpetually shuffling around in the fog and cotton-wool of abstract terms; to be forever hearkening, like Ibsen's Peer Gynt, to the voice of the Boyg exhorting you to circumvent the difficulty, to beat the air because it is easier than to flesh your sword in the thing. The first virtue, the touchstone of masculine style, is its use of the active verb and the concrete noun. When you write "He was made the recipient of a silver teapot," you write jargon. But at the beginning set even higher store on the concrete noun. Somebody — I think it was Fitzgerald — once posited the

question, "What would have become of Christianity if Jeremy Bentham had had the writing of the Parables?" Without pursuing that dreadful inquiry, I ask you to note how carefully the Parables — those exquisite short stories — speak only of "things which you can touch and see" — "A sower went forth to sow," "The Kingdom of Heaven is like unto leaven, which a woman took," — and not the Parables only, but the Sermon on the Mount and almost every verse of the Gospel. The Gospel does not, like my young essayist, fear to repeat a word if the word be good. The Gospel says "Render unto Cæsar the things that are Cæsar's" — not "Render unto Cæsar the things that appertain to that potentate." The Gospel does not say "Consider the growth of the lilies," or even "Consider how the lilies grow." It says, "Consider the lilies, how they grow."

Or take Shakespeare. I wager you that no writer of English so constantly chooses the concrete word, in phrase after phrase, forcing you to touch and see. No writer so insistently teaches the general through the particular. He does it even in *Venus and Adonis* (as Professor Wendell, of Harvard, pointed out in a brilliant little monograph on Shakespeare, published some ten years ago). Read any page of *Venus and Adonis* side by side with any page of Marlowe's *Hero and Leander* and you cannot but mark the contrast: in Shakespeare the definite, particular, visualized image, in Marlowe the beautiful generalization, the abstract term, the thing seen at a literary remove. Take the two openings, both of which start out with the sunrise. Marlowe begins: —

Now had the Morn espied her lover's steeds:
Whereat she starts, puts on her purple weeds,
And, red for anger that he stay'd so long,
All headlong throws herself the clouds among.

Shakespeare wastes no words on Aurora and her feelings, but gets to his hero and to business without ado: —

Even as the sun with purple-color'd face —

(You have the sun visualized at once) —

Even as the sun with purple-color'd face
Had ta'en his last leave of the weeping morn,
Rose-cheek'd Adonis hied him to the chase;
Hunting he loved, but love he laugh'd to scorn.

When Shakespeare has to describe a horse, mark how definite he is: —

Round-hoof'd, short-jointed, fetlocks shag and long,
Broad breast, full eye, small head and nostril wide,
High crest, short ears, straight legs and passing strong;
Thin mane, thick tail, broad buttock, tender hide.

Or again, in a casual simile, how definite: —

Upon this promise did he raise his chin,
Like a dive-dipper peering through a wave,
Which, being look'd on, ducks as quickly in.

Or take, if you will, Marlowe's description of Hero's first meeting Leander: —

It lies not in our power to love or hate,
For will in us is overruled by fate. . . .

and set against it Shakespeare's description of Venus's last meeting with Adonis, as she came on him lying in his blood: —

Or as a snail whose tender horns being hit
Shrinks backward in his shelly cave with pain,
And there, all smother'd up, in shade doth sit,
Long after fearing to creep forth again;
So, at his bloody view —

I do not deny Marlowe's lines (if you will study the whole passage) to be lovely. You may even judge Shakespeare's to be crude by comparison. But you cannot help noting that whereas Marlowe steadily deals in abstract, nebulous terms, Shakespeare constantly uses concrete ones, which later on he learned to pack into verse, such as: —

Sleep that knits up the ravel'd sleeve of care.

Is it unfair to instance Marlowe, who died young? Then let us take Webster for the comparison — Webster, a man of genius or of something very like it, and commonly praised by the critics for his mastery over definite, detailed, and what I may call *solidified sensation*. Let us take this admired passage from his *Duchess of Malfy*: —

Ferdinand. How doth our sister Duchess bear herself
In her imprisonment?

Basola. Nobly: I'll describe her.
She's sad as one long wed to't, and she seems
Rather to welcome the end of misery
Than shun it: a behavior so noble
As gives a majesty to adversity.¹
You may discern the shape of loveliness
More perfect in her tears than in her smiles;
She will muse for hours together;² and her silence
Methinks expresseth more than if she spake

Now set against this the well-known passage from *Twelfth Night*, where the Duke asks and Viola answers a question about some one unknown to him and invented by her — a mere phantasm, in short: yet note how much more definite is the language: —

Viola. My father had a daughter lov'd a man;
As it might be, perhaps, were I a woman,
I should your lordship.

Duke. And what's her history?

Viola. A blank, my lord. She never told her love,
But let concealment, like a worm i' the bud,
Feed on her damask cheek; she pined in thought,
And with a green and yellow melancholy
She sat like Patience on a monument,
Smiling at grief. Was not this love indeed?

Observe (apart from the dramatic skill of it) how, when Shakespeare *has* to use the abstract noun "concealment," on an instant it turns into a visible worm "feeding" on the visible

¹ Note the abstract terms.

² Here we first come on the concrete; and beautiful it is.

rose; how, having to use a second abstract word "patience," at once he solidifies it in tangible stone.

Turning to prose, you may easily assure yourselves that men who have written learnedly on the art agree in treating our maxim — to prefer the concrete term to the abstract, the particular to the general, the definite to the vague — as a canon of rhetoric. Whately has much to say on it. The late Mr. E. J. Payne, in one of his admirable prefaces to Burke (prefaces too little known and valued, as too often happens to scholarship hidden away in a schoolbook), illustrated the maxim by setting a passage from Burke's speech *On Conciliation with America* alongside a passage of like purport from Lord Brougham's *Inquiry into the Policy of the European Powers*. Here is the deadly parallel: —

BURKE

In large bodies the circulation of power must be less vigorous at the extremities. Nature has said it. The Turk cannot govern Ægypt and Arabia and Kurdistan as he governs Thrace; nor has he the same dominion in Crimea and Algiers which he has in Brusa and Smyrna. Despotism itself is obliged to truck and huckster. The Sultan gets such obedience as he can. He governs with a loose rein, that he may govern at all; and the whole of the force and vigour of his authority in his centre is derived from a prudent relaxation in all his borders.

BROUGHAM

In all the despotisms of the East, it has been observed that the further any part of the empire is removed from the capital, the more do its inhabitants enjoy some sort of rights and privileges; the more inefficacious is the power of the monarch; and the more feeble and easily decayed is the organization of the government.

You perceive that Brougham has transferred Burke's thought to his own page; but will you not also perceive how pitifully, by dissolving Burke's vivid particulars into smooth generalities, he has enervated its hold on the mind?

"This particularizing style," comments Mr. Payne, "is the essence of poetry; and in prose it is impossible not to be struck with the energy it produces. Brougham's passage is excellent in its way; but it pales before the flashing lights of Burke's sentences." The best instances of this energy of style, he adds, are to be found in the classical writers of the seventeenth century. "When South says 'An Aristotle was but the rubbish of an Adam, and Athens but the rudiments of Paradise,' he communicates more effectually the notion of the difference between the intellect of fallen and of unfallen humanity than in all the philosophy of his sermons put together."

You may agree with me, or you may not, that South in this passage is expounding trash; but you will agree with Mr. Payne and me that he uttered it vividly.

Let me quote to you, as a final example of this vivid style of writing, a passage from Dr. John Donne far beyond and above anything that ever lay within South's compass: —

The ashes of an Oak in the Chimney are no epitaph of that Oak, to tell me how high or how large that was; it tells me not what flocks it sheltered while it stood, nor what men it hurt when it fell. The dust of great persons' graves is speechless, too; it says nothing, it distinguishes nothing. As soon the dust of a wretch whom thou wouldest not, as of a prince whom thou couldest not look upon will trouble thine eyes if the wind blow it thither; and when a whirlwind hath blown the dust of the Church, and the man sweep out the dust of the Church into the Churchyard, who will undertake to sift those dusts again and to pronounce, This is the Patrician, this is the noble flowre [flour], this the yeomanly, this the Plebeian barn? So is the death of *Iesabel* (*Iesabel* was a Queen) expressed. They shall not say *This is Iesabel*: not only not wonder that it is, nor pity that it should be; but they shall not say, they shall not know, *This is Iesabel*.

Carlyle noted of Goethe, "his emblematic intellect, his never-failing tendency to transform into *shape*, into *life*, the feeling that may dwell in him. Everything has form, has visual excellence: the poet's imagination bodies forth the forms of things unseen, and his pen turns them into shape."

Perpend this, Gentlemen, and maybe you will not hereafter set it down to my reproach that I wasted an hour of a May morning in a denunciation of jargon, and in exhorting you upon a technical matter at first sight so trivial as the choice between abstract and definite words.

A lesson about writing your language may go deeper than language; for language (as in a former lecture I tried to preach to you) is your reason, your λόγος. So long as you prefer abstract words, which express other men's summarized concepts of things, to concrete ones which lie as near as can be reached to things themselves and are the first-hand material for your thoughts, you will remain, at the best, writers at second-hand. If your language be jargon, your intellect, if not your whole character, will almost certainly correspond. Where your mind should go straight, it will dodge: the difficulties it should approach with a fair front and grip with a firm hand it will be seeking to evade or circumvent. For the style is the man, and where a man's treasure is, there his heart, and his brain, and his writing will be also.

TALK AND TALKERS¹

ROBERT LOUIS STEVENSON

"Sir, we had a good talk." — JOHNSON.

"As we must account for every idle word, so we must for every idle silence." — FRANKLIN.

THERE can be no fairer ambition than to excel in talk; to be affable, gay, ready, clear, and welcome; to have a fact, a thought, or an illustration, pat to every subject; and not only to cheer the flight of time among our intimates, but bear our part in that great international congress, always sitting, where public wrongs are first declared, public errors first corrected, and the course of public opinion shaped, day by day, a little nearer to the right. No measure comes before Parliament but it has been long ago prepared by the grand jury of the talkers; no book is written that has not been largely composed by their assistance. Literature in many of its branches is not other than the shadow of good talk; but the imitation falls far short of the original in life, freedom, and effect. There are always two to a talk, giving and taking, comparing experience and according conclusions. Talk is fluid, tentative, continually "in further search and progress"; while written words remain fixed, become idols even to the writer, found wooden dogmatisms, and preserve flies of obvious error in the amber of the truth. Last and chief, while literature, gagged with linsey-woolsey, can only deal with a fraction of the life of man, talk goes fancy free and may call a spade a spade. It cannot, even if it would, become merely æsthetic or merely classical like literature. A jest intervenes, the solemn humbug is dissolved in laughter, and speech

¹ The first of two papers on this subject written in 1881-82; reprinted here, from *Memories and Portraits*.

runs forth out of the contemporary groove into the open fields of nature, cheery and cheering, like schoolboys out of school. And it is in talk alone that we can learn our period and ourselves. In short, the first duty of a man is to speak; that is his chief business in this world; and talk, which is the harmonious speech of two or more, is by far the most accessible of pleasures. It costs nothing in money; it is all profit; it completes our education, founds and fosters our friendships, and can be enjoyed at any age and in almost any state of health.

The spice of life is battle; the friendliest relations are still a kind of contest; and if we would not forego all that is valuable in our lot, we must continually face some other person, eye to eye, and wrestle a fall whether in love or enmity. It is still by force of body, or power of character or intellect, that we attain to worthy pleasures. Men and women contend for each other in the lists of love, like rival mesmerists; the active and adroit decide their challenges in the sports of the body; and the sedentary sit down to chess or conversation. All sluggish and pacific pleasures are, to the same degree, solitary and selfish; and every durable bond between human beings is founded on or heightened by some element of competition. Now, the relation that has the least root in matter is undoubtedly that airy one of friendship; and hence, I suppose, it is that good talk most commonly arises among friends. Talk is, indeed, both the scene and instrument of friendship. It is in talk alone that the friends can measure strength, and enjoy that amicable counter-assertion of personality which is the gauge of relations and the sport of life.

A good talk is not to be had for the asking. Humors must first be accorded in a kind of overture or prologue; hour, company, and circumstance be suited; and then, at a fit juncture, the subject, the quarry of two heated minds, springs up like a deer out of the wood. Not that the talker has any of the hunter's pride, though he has all and more than all his ardor. The genuine artist follows the stream of conversation as an angler follows the windings of a brook, not dallying where he

fails to "kill." He trusts implicitly to hazard; and he is rewarded by continual variety, continual pleasure, and those changing prospects of the truth that are the best of education. There is nothing in a subject, so called, that we should regard it as an idol, or follow it beyond the promptings of desire. Indeed, there are few subjects; and so far as they are truly talkable, more than the half of them may be reduced to three: that I am I, that you are you, and that there are other people dimly understood to be not quite the same as either. Wherever talk may range, it still runs half the time on these eternal lines. The theme being set, each plays on himself as on an instrument; asserts and justifies himself; ransacks his brain for instances and opinions, and brings them forth new-minted, to his own surprise and the admiration of his adversary. All natural talk is a festival of ostentation; and by the laws of the game each accepts and fans the vanity of the other. It is from that reason that we venture to lay ourselves so open, that we dare to be so warmly eloquent, and that we swell in each other's eyes to such a vast proportion. For talkers, once launched, begin to overflow the limits of their ordinary selves, tower up to the height of their secret pretension, and give themselves out for the heroes, brave, pious, musical, and wise, that in their most shining moments they aspire to be. So they weave for themselves with words and for a while inhabit a palace of delights, temple at once and theater, where they fill the round of the world's dignities, and feast with the gods, exulting in *Kudos*.¹ And when the talk is over, each goes his way, still flushed with vanity and admiration, still trailing clouds of glory; each declines from the height of his ideal orgy, not in a moment, but by slow declension. I remember, in the *entr'acte* of an afternoon performance, coming forth into the sunshine, in a beautiful green, gardened corner of a romantic city; and as I sat and smoked, the music moving in my blood, I seemed to sit there and evaporate *The Flying Dutchman* (for it was that I had been hearing)

¹ *Kudos* (Greek): glory.

with a wonderful sense of life, warmth, well-being, and pride; and the noises of the city, voices, bells, and marching feet, fell together in my ears like a symphonious orchestra. In the same way, the excitement of a good talk lives for a long while after in the blood, the heart still hot within you, the brain still simmering, and the physical earth swimming around you with the colors of the sunset.

Natural talk, like plowing, should turn up a large surface of life, rather than dig mines into geological strata. Masses of experience, anecdote, incident, cross-lights, quotation, historical instances — the whole flotsam and jetsam of two minds forced in and in upon the matter in hand from every point of the compass, and from every degree of mental elevation and abasement — these are the material with which talk is fortified, the food on which the talkers thrive. Such argument as is proper to the exercise should still be brief and seizing. Talk should proceed by instances; by the apposite, not the expository. It should keep close along the lines of humanity, near the bosoms and businesses of men, at the level where history, fiction, and experience intersect and illuminate each other. I am I, and You are You, with all my heart; but conceive how these lean propositions change and brighten when, instead of words, the actual you and I sit cheek by jowl, the spirit housed in the live body, and the very clothes uttering voices to corroborate the story in the face. Not less surprising is the change when we leave off to speak of generalities — the bad, the good, the miser, and all the characters of Theophrastus — and call up other men, by anecdote or instance, in their very trick and feature; or trading on a common knowledge, toss each other famous names, still glowing with the hues of life. Communication is no longer by words, but by the instancing of whole biographies, epics, systems of philosophy, and epochs of history, in bulk. That which is understood excels that which is spoken in quantity and quality alike; ideas thus figured and personified change hands, as we may say, like coin; and the speakers imply without effort the

most obscure and intricate thoughts. Strangers who have a large common ground of reading will, for this reason, come the sooner to the grapple of genuine converse. If they know Othello and Napoleon, Consuelo and Clarissa Harlowe, Vautrin and Steenie Steenson, they can leave generalities and begin at once to speak by figures.

Conduct and art are the two subjects that arise most frequently and that embrace the widest range of facts. A few pleasures bear discussion for their own sake, but only those which are most social or most radically human; and even these can only be discussed among their devotees. A technicality is always welcome to the expert, whether in athletics, art, or law; I have heard the best kind of talk on technicalities from such rare and happy persons as both know and love their business. No human being ever spoke of scenery for above two minutes at a time, which makes me suspect we hear too much of it in literature. The weather is regarded as the very nadir and scoff of conversational topics. And yet the weather, the dramatic element in scenery, is far more tractable in language, and far more human both in import and suggestion, than the stable features of the landscape. Sailors and shepherds, and the people generally of coast and mountain, talk well of it; and it is often excitingly presented in literature. But the tendency of all living talk draws it back and back into the common focus of humanity. Talk is a creature of the street and market-place, feeding on gossip; and its last resort is still in a discussion on morals. That is the heroic form of gossip; heroic in virtue of its high pretensions; but still gossip, because it turns on personalities. You can keep no men long, nor Scotchmen at all, off moral or theological discussion. These are to all the world what law is to lawyers; they are everybody's technicalities; the medium through which all consider life, and the dialect in which they express their judgments. I knew three young men who walked together daily for some two months in a solemn and beautiful forest and in cloudless summer weather;

daily they talked with unabated zest, and yet scarce wandered that whole time beyond two subjects — theology and love. And perhaps neither a court of love¹ nor an assembly of divines would have granted their premises or welcomed their conclusions.

Conclusions, indeed, are not often reached by talk any more than by private thinking. That is not the profit. The profit is in the exercise, and above all in the experience; for when we reason at large on any subject, we review our state and history in life. From time to time, however, and specially, I think, in talking art, talk becomes effective, conquering like war, widening the boundaries of knowledge like an exploration. A point arises; the question takes a problematical, a baffling, yet a likely air; the talkers begin to feel lively presentiments of some conclusion near at hand; towards this they strive with emulous ardor, each by his own path, and struggling for first utterance; and then one leaps upon the summit to that matter with a shout, and almost at the same moment the other is beside him; and behold, they are agreed. Like enough, the progress is illusory, a mere cat's cradle having been wound and unwound out of words. But the sense of joint discovery is none the less giddy and inspiriting. And in the life of the talker such triumphs, though imaginary, are neither few nor far apart; they are attained with speed and pleasure, in the hour of mirth; and by the nature of the process, they are always worthily shared.

There is a certain attitude combative at once and deferential, eager to fight yet most averse to quarrel, which marks out at once the talkable man. It is not eloquence, not fairness, not obstinacy, but a certain proportion of all of these that I love to encounter in my amicable adversaries. They must not be pontiffs holding doctrine, but huntsmen questing after elements of truth. Neither must they be boys to be instructed, but fellow-teachers with whom I may wrangle and agree on equal

¹ Court of love: a mediæval institution for the discussion of questions of chivalry.

terms. We must reach some solution, some shadow of consent; for without that, eager talk becomes a torture. But we do not wish to reach it cheaply, or quickly, or without the tussle and effort wherein pleasure lies.

The very best talker, with me, is one whom I shall call Spring-Heel'd Jack. I say so, because I never knew anyone who mingled so largely the possible ingredients of converse. In the Spanish proverb, the fourth man necessary to compound a salad is a madman to mix it; Jack is that madman. I know not which is more remarkable: the insane lucidity of his conclusions, the humorous eloquence of his language, or his power of method, bringing the whole of life into the focus of the subject treated, mixing the conversational salad like a drunken god. He doubles like the serpent, changes and flashes like the shaken kaleidoscope, transmigrates bodily into the views of others, and so, in the twinkling of an eye and with a heady rapture, turns questions inside out and flings them empty before you on the ground, like a triumphant conjuror. It is my common practice, when a piece of conduct puzzles me, to attack it in the presence of Jack with such grossness, such partiality, and such wearing iteration as at length shall spur him up in its defense. In a moment he transmigrates, dons the required character, and with moonstruck philosophy justifies the act in question. I can fancy nothing to compare with the *vim* of these impersonations, the strange scale of language, flying from Shakespeare to Kant and from Kant to Major Dyngwell —

As fast as a musician scatters sounds
Out of an instrument —

the sudden, sweeping generalizations, the absurd irrelevant particularities, the wit, wisdom, folly, humor, eloquence, and pathos, each startling in its kind, and yet all luminous in the admired disorder of their combination. A talker of a different caliber, though belonging to the same school, is Burly. Burly is a man of great presence; he commands a larger atmosphere,

gives the impression of a grosser mass of character than most men. It has been said of him that his presence could be felt in a room you entered blindfold; and the same, I think, has been said of other powerful constitutions condemned to much physical inaction. There is something boisterous and piratic in Burly's manner of talk which suits well enough with this impression. He will roar you down, he will bury his face in his hands, he will undergo passions of revolt and agony; and meanwhile his attitude of mind is really both conciliatory and receptive; and after Pistol has been out-Pistol'd, and the welkin rung for hours, you begin to perceive a certain subsidence in these spring torrents, points of agreement issue, and you end arm-in-arm, and in a glow of mutual admiration. The outcry only serves to make your final union the more unexpected and precious. Throughout there has been perfect sincerity, perfect intelligence, a desire to hear although not always to listen, and an unaffected eagerness to meet concessions. You have, with Burly, none of the dangers that attend debate with Spring-Heel'd Jack, who may at any moment turn his powers of transmigration on yourself, create for you a view you never held, and then furiously fall on you for holding it. These, at least, are my two favorites, and both are loud, copious, intolerant talkers. This argues that I myself am in the same category; for if we love talking at all, we love a bright, fierce adversary, who will hold his ground, foot by foot, in much our own manner, sell his attention dearly, and give us our full measure of the dust and exertion of battle. Both these men can be beat from a position, but it takes six hours to do it—a high and hard adventure, worth attempting. With both you can pass days in an enchanted country of the mind, with people, scenery, and manners of its own; live a life apart, more arduous, active, and glowing than any real existence; and come forth again when the talk is over, as out of a theater or a dream, to find the east wind still blowing and the chimney-pots of the old battered city still around you. Jack has the far finer mind, Burly the far more honest; Jack

gives us the animated poetry, Burly the romantic prose, of similar themes; the one glances high like a meteor and makes a light in darkness; the other, with many changing hues of fire, burns at the sea-level, like a conflagration; but both have the same humor and artistic interests, the same unquenched ardor in pursuit, the same gusts of talk and thunderclaps of contradiction.

Cockshot¹ is a different article, but vastly entertaining, and has been meat and drink to me for many a long evening. His manner is dry, brisk, and pertinacious, and the choice of words not much. The point about him is his extraordinary readiness and spirit. You can propound nothing but he has either a theory about it ready-made, or will have one instantly on the stocks, and proceed to lay its timbers and launch it in your presence. "Let me see," he will say. "Give me a moment. I *should* have some theory for that." A blither spectacle than the vigor with which he sets about the task, it were hard to fancy. He is possessed by a demoniac energy, welding the elements for his life, and bending ideas, as an athlete bends a horseshoe, with a visible and lively effort. He has, in theorizing, a compass, an art; what I would call the synthetic gusto; something of Herbert Spencer, who should see the fun of the thing. You are not bound, and no more is he, to place your faith in these brand-new opinions. But some of them are right enough, durable even for life; and the poorest serve for a cock-shy—as when idle people, after picnics, float a bottle on a pond and have an hour's diversion ere it sinks. Whichever they are, serious opinions or humors of the moment, he still defends his ventures with indefatigable wit and spirit, hitting savagely himself, but taking punishment like a man. He knows and never forgets that people talk, first of all, for the sake of talking; conducts himself in the ring, to use the old slang, like a thorough "glutton," and honestly enjoys a telling facer from his adversary. Cockshot is bottled effervescency, the sworn foe to sleep. Three-in-the

¹ The late Fleeming Jenkin — Author's note.

morning Cockshot, says a victim. His talk is like the driest of all imaginable dry champagnes. Sleight of hand and inimitable quickness are the qualities by which he lives. Athelred, on the other hand, presents you with the spectacle of a sincere and somewhat slow nature thinking aloud. He is the most unready man I ever knew to shine in conversation. You may see him sometimes wrestle with a refractory jest for a minute or two together, and perhaps fail to throw it in the end. And there is something singularly engaging, often instructive, in the simplicity with which he thus exposes the process as well as the result, the works as well as the dial of the clock. Withal he has his hours of inspiration. Apt words come to him as if by accident, and, coming from deeper down, they smack the more personally, they have the more of fine old crusted humanity, rich in sediment and humor. There are sayings of his in which he has stamped himself into the very grain of the language; you would think he must have worn the words next his skin and slept with them. Yet it is not as a sayer of particular good things that Athelred is most to be regarded, rather as the stalwart woodman of thought. I have pulled on a light cord often enough, while he has been wielding the broad-axe; and between us, on this unequal division, many a specious fallacy has fallen. I have known him to battle the same question night after night for years, keeping it in the reign of talk, constantly applying it and re-applying it to life with humorous or grave intention, and all the while, never hurrying, nor flagging, nor taking an unfair advantage of the facts. Jack at a given moment, when arising, as it were, from the tripod, can be more radiantly just to those from whom he differs; but then the tenor of his thoughts is even calumnious; while Athelred, slower to forge excuses, is yet slower to condemn, and sits over the welter of the world, vacillating but still judicial, and still faithfully contending with his doubts.

Both the last talkers deal much in points of conduct and religion studied in the "dry light" of prose. Indirectly and as if against his will the same elements from time to time appear

in the troubled and poetic talk of Opalstein. His various and exotic knowledge, complete although unready sympathies, and fine, full, discriminative flow of language, fit him out to be the best of talkers; so perhaps he is with some, not *quite* with me — *proxime accessit*,¹ I should say. He sings the praises of the earth and the arts, flowers and jewels, wine and music, in a moonlight, serenading manner, as to the light guitar; even wisdom comes from his tongue like singing; no one is, indeed, more tuneful in the upper notes. But even while he sings the song of the Sirens, he still hearkens to the barking of the Sphinx. Jarring Byronic notes interrupt the flow of his Horatian humors. His mirth has something of the tragedy of the world for its perpetual background; and he feasts like Don Giovanni to a double orchestra, one lightly sounding for the dance, one pealing Beethoven in the distance. He is not truly reconciled either with life or with himself; and this instant war in his members sometimes divides the man's attention. He does not always, perhaps not often, frankly surrender himself in conversation. He brings into the talk other thoughts than those which he expresses; you are conscious that he keeps an eye on something else, that he does not shake off the world, nor quite forget himself. Hence arise occasional disappointments; even an occasional unfairness for his companions, who find themselves one day giving too much, and the next, when they are wary out of season, giving perhaps too little. Purcel is in another class from any I have mentioned. He is no debater, but appears in conversation, as occasion rises, in two distinct characters, one of which I admire and fear, and the other love. In the first, he is radiantly civil and rather silent, sits on a high, courtly hilltop, and from that vantage-ground drops you his remarks like favors. He seems not to share in our sublunary contentions; he wears no sign of interest; when on a sudden there falls in a crystal of wit, so polished that the dull do not perceive it, but so right that the sensitive are silenced. True talk should

¹ *Proxime accessit*: he comes very close to it.

have more body and blood, should be louder, vainer, and more declaratory of the man; the true talker should not hold so steady an advantage over whom he speaks with; and that is one reason out of a score why I prefer my Purcel in his second character, when he unbends into a strain of graceful gossip, singing like the fireside kettle. In these moods he has an elegant homeliness that rings of the true Queen Anne. I know another person who attains, in his moments, to the insolence of a Restoration comedy, speaking, I declare, as Congreve wrote; but that is a sport of nature, and scarce falls under the rubric, for there is none, alas! to give him answer.

One last remark occurs: It is the mark of genuine conversation that the sayings can scarce be quoted with their full effect beyond the circle of common friends. To have their proper weight they should appear in a biography, and with the portrait of the speaker. Good talk is dramatic; it is like an impromptu piece of acting where each should represent himself to the greatest advantage; and that is the best kind of talk where each speaker is most fully and candidly himself, and where, if you were to shift the speeches round from one to another, there would be the loss in significance and perspicuity. It is for this reason that talk depends so wholly on our company. We should like to introduce Falstaff and Mercutio, or Falstaff and Sir Toby; but Falstaff in talk with Cordelia seems even painful. Most of us, by the Protean quality of man, can talk to some degree with all; but the true talk, that strikes out all the slumbering best of us, comes only with the peculiar brethren of our spirits, is founded as deep as love in the constitution of our being, and is a thing to relish with all our energy, while yet we have it, and to be grateful for forever.

MANNERS AND FASHION¹

HERBERT SPENCER

SOME who shun drawing-rooms do so from inability to bear the restraints prescribed by a genuine refinement, and they would be greatly improved by being kept under these restraints. But it is not less true that, by adding to the legitimate restraints, which are based on convenience and a regard for others, a host of factitious restraints based only on convention, the refining discipline, which would else have been borne with benefit, is rendered unbearable, and so misses its end. Excess of government invariably defeats itself by driving away those to be governed. And if over all who desert its entertainments in disgust either at their emptiness or their formality, society thus loses its salutary influence — if such not only fail to receive that moral culture which the company of ladies, when rationally regulated, would give them, but, in default of other relaxation, are driven into habits and companionships which often end in gambling and drunkenness; must we not say that here, too, is an evil not to be passed over as insignificant?

Then consider what a blighting effect these multitudinous preparations and ceremonies have upon the pleasures they profess to subserve. Who, on calling to mind the occasions of his highest social enjoyments, does not find them to have been wholly informal, perhaps impromptu? How delightful a picnic of friends, who forget all observances save those dictated by good nature! How pleasant the little unpretended gatherings of book societies, and the like; or those purely accidental meetings of a few people well known to each other! Then, indeed, we

¹ From *Illustrations of Universal Progress*, 1864.

may see that "a man sharpeneth the countenance of his friend." Cheeks flush, and eyes sparkle. The witty grow brilliant, and even the dull are excited into saying good things. There is an overflow of topics; and the right thought, and the right words to put it in, spring up unsought. Grave alternates with gay: now serious converse, and now jokes, anecdotes, and playful raillery. Everyone's best nature is shown, everyone's best feelings are in pleasurable activity; and, for the time, life seems well worth having.

Go now and dress for some half-past eight dinner, or some ten o'clock "at home"; and present yourself in spotless attire, with every hair arranged to perfection. How great the difference! The enjoyment seems in the inverse ratio of the preparation. These figures, got up with such finish and precision, appear but half alive. They have frozen each other by their primness; and your faculties feel the numbing effects of the atmosphere the moment you enter it. All those thoughts, so nimble and so apt awhile since, have disappeared — have suddenly acquired a preternatural power of eluding you. If you venture a remark to your neighbor, there comes a trite rejoinder, and there it ends. No subject you can hit upon outlives half a dozen sentences. Nothing that is said excites any real interest in you; and you feel that all you say is listened to with apathy. By some strange magic, things that usually give pleasure seem to have lost all charm.

You have a taste for art. Weary of frivolous talk, you turn to the table, and find that the book of engravings and the portfolio of photographs are as flat as the conversation. You are fond of music. Yet the singing, good as it is, you hear with utter indifference; and say "Thank you" with a sense of being a profound hypocrite. Wholly at ease though you could be, for your own part, you find that your sympathies will not let you. You see young gentlemen feeling whether their ties are properly adjusted, looking vacantly round, and considering what they shall do next. You see ladies sitting disconsolately, waiting for

some one to speak to them, and wishing they had the wherewith to occupy their fingers. You see the hostess standing about the doorway, keeping a factitious smile on her face and racking her brain to find the requisite nothings with which to greet her guests as they enter. You see numberless traits of weariness and embarrassment; and, if you have any fellow-feeling, these cannot fail to produce a feeling of discomfort. The disorder is catching; and do what you will you cannot resist the general infection. You struggle against it; you make spasmodic efforts to be lively; but none of your sallies or your good stories do more than raise a simper or a forced laugh: intellect and feeling are alike asphyxiated. And when, at length, yielding to your disgust, you rush away, how great is the relief when you get into the fresh air, and see the stars! How you "Thank God, that's over!" and half resolve to avoid all such boredom for the future!

What, now, is the secret of this perpetual miscarriage and disappointment? Does not the fault lie with all these needless adjuncts — these elaborate dressings, these set forms, these expensive preparations, these many devices and arrangements that imply trouble and raise expectation? Who that has lived thirty years in the world has not discovered that Pleasure is coy; and must not be too directly pursued, but must be caught unawares? An air from a street-piano, heard while at work, will often gratify more than the choicest music played at a concert by the most accomplished musicians. A single good picture seen in a dealer's window may give keener enjoyment than a whole exhibition gone through with catalogue and pencil. By the time we have got ready our elaborate apparatus by which to secure happiness, the happiness is gone. It is too subtle to be contained in these receivers, garnished with compliments, and fenced round with etiquette. The more we multiply and complicate appliances, the more certain are we to drive it away.

The reason is patent enough. These higher emotions to which social intercourse ministers are of extremely complex

nature; they consequently depend for their production upon very numerous conditions; the more numerous the conditions, the greater the liability that one or other of them will be disturbed, and the emotions consequently prevented. It takes a considerable misfortune to destroy appetite; but cordial sympathy with those around may be extinguished by a look or a word. Hence it follows, that the more multiplied the *unnecessary* requirements with which social intercourse is surrounded, the less likely are its pleasures to be achieved. It is difficult enough to fulfill continuously all the *essentials* to a pleasurable communion with others; how much more difficult, then, must it be continuously to fulfill a host of *nonessentials* also! It is, indeed, impossible! The attempt inevitably ends in the sacrifice of the first to the last — the essentials to the nonessentials. What chance is there of getting any genuine response from the lady who is thinking of your stupidity in taking her in to dinner on the wrong arm? How are you likely to have agreeable converse with the gentleman who is fuming internally because he is not placed next to the hostess? Formalities, familiar as they may become, necessarily occupy attention — necessarily multiply the occasions for mistake, misunderstanding, and jealousy, on the part of one or other — necessarily distract all minds from the thoughts and feelings that should occupy them — necessarily, therefore, subvert those conditions under which only any sterling intercourse is to be had.

And this indeed is the fatal mischief which these conventions entail — a mischief to which every other is secondary. They destroy those highest of our pleasures which they profess to subserve. All institutions are alike in this, that however useful, and needful even, they originally were, they not only in the end cease to be so, but become detrimental. While humanity is growing, they continue fixed; daily get more mechanical and unvital; and by and by tend to strangle what they before preserved. It is not simply that they become corrupt and fail to act; they become obstructions. Old forms of government

finally grow so oppressive that they must be thrown off even at the risk of reigns of terror. Old creeds end in being dead formulas, which no longer aid but distort and arrest the general mind; while the State-churches administering them come to be instruments for subsiding conservatism and repressing progress. Old schemes of education, incarnated in public schools and colleges, continue filling the heads of new generations with what has become relatively useless knowledge, and, by consequence, excluding knowledge which is useful. Not an organization of any kind — political, religious, literary, philanthropic — but what, by its ever-multiplying regulations, its accumulating wealth, its yearly addition of officers, and the creeping into it of patronage and party feeling, eventually loses its original spirit, and sinks into a mere lifeless mechanism, worked with a view to private ends — a mechanism which not merely fails of its first purpose, but is a positive hindrance to it.

Thus is it, too, with social usages. We read of the Chinese that they have "ponderous ceremonies transmitted from time immemorial," which make social intercourse a burden. The court forms prescribed by monarchs for their own exaltation have, in all times and places, ended in consuming the comfort of their lives. And so the artificial observances of the dining room and saloon, in proportion as they are many and strict, extinguish that agreeable communion which they were originally intended to secure. The dislike with which people commonly speak of society that is "formal," and "stiff," and "ceremonious" implies the general recognition of this fact; and this recognition, logically developed, involves that all usages of behavior which are not based on natural requirements are injurious. That these conventions defeat their own ends is no new assertion. Swift, criticising the manners of his day, says — "Wise men are often more uneasy at the over-civility of these refiners than they could possibly be in the conversation of peasants and mechanics."

But it is not only in these details that the self-defeating action

of our arrangements is traceable: it is traceable in the very substance and nature of them. Our social intercourse, as commonly managed, is a mere semblance of the reality sought. What is it that we want? Some sympathetic converse with our fellow creatures: some converse that shall not be mere dead words but the vehicle of living thoughts and feelings — converse in which the eyes and the face shall speak, and the tones of the voice be full of meaning — converse which shall make us feel no longer alone, but shall draw us closer to another, and double our own emotions by adding another's to them. Who is there that has not, from time to time, felt how cold and flat is all this talk about politics and science, and the new books and the new men, and how a genuine utterance of fellow-feeling outweighs the whole of it? Mark the words of Bacon: "For a crowd is not a company, and faces are but a gallery of pictures, and talk, but a tinkling cymbal, where there is no love."

If this be true, then it is only after acquaintance has grown into intimacy, and intimacy has ripened into friendship, that the real communion which men need becomes possible. A rationally-formed circle must consist almost wholly of those on terms of familiarity and regard, with but one or two strangers. What folly, then, underlies the whole system of our grand dinners, our "at homes," our evening parties — assemblages made up of many who never met before, many others who just bow to each other, many others who though familiar feel mutual indifference, with just a few real friends lost in the general mass! You need but look round at the artificial expression of face, to see at once how it is. All have their disguises on; and how can there be sympathy between masks? No wonder that in private everyone exclaims against the stupidity of these gatherings. No wonder that hostesses get them up rather because they must than because they wish. No wonder that the invited go less from the expectation of pleasure than from fear of giving offense. The whole thing is a gigantic mistake — an organized disappointment.

And then note, lastly, that in this case, as in all others, when an organization has become effete and inoperative for its legitimate purpose, it is employed for quite other ones — quite opposite ones. What is the usual plea put in for giving and attending these tedious assemblies? “I admit that they are stupid and frivolous enough,” replies every man to your criticisms; “but then, you know, one must keep up one’s connections.” And could you get from his wife a sincere answer, it would be — “Like you, I am sick of these frivolities; but then, we must get our daughters married.” The one knows that there is a profession to push, a practice to gain, a business to extend; or parliamentary influence, or county patronage, or votes, or office, to be got; position, berths, favors, profit. The other’s thoughts run upon husbands and settlements, wives and dowries. Worthless for their ostensible purpose of daily bringing human beings into pleasurable relations with each other, these cumbrous appliances of our social intercourse are now perseveringly kept in action with a view to the pecuniary and matrimonial results which they indirectly produce.

Who then shall say that the reform of our system of observances is unimportant? When we see how this system induces fashionable extravagance, with its entailed bankruptcy and ruin — when we mark how greatly it limits the amount of social intercourse among the less wealthy classes — when we find that many who most need to be disciplined by mixing with the refined are driven away by it, and led into dangerous and often fatal courses — when we count up the many minor evils it inflicts, the extra work which its costliness entails on all professional and mercantile men, the damage to public taste in dress and decoration by the setting up of its absurdities as standards for imitation, the injury to health indicated in the faces of its devotees at the close of the London season, the mortality of milliners and the like, which its sudden exigencies yearly involve; and when to all these we add its fatal sin, that it blights, withers up, and kills that high enjoyment it professedly ministers to, — that enjoy-

ment which is a chief end of our hard struggling in life to obtain, — shall we not conclude that to reform our system of etiquette and fashion is an aim yielding to few in urgency?

There needs, then, a protestantism in social usages. Forms that have ceased to facilitate and have become obstructive — whether political, religious, or other — have ever to be swept away; and eventually are so swept away in all cases. Signs are not wanting that some change is at hand. A host of satirists, led on by Thackeray, have been for years engaged in bringing our sham festivities, and our fashionable follies, into contempt; and in their candid moods most men laugh at the frivolities with which they and the world in general are deluded. Ridicule has always been a revolutionary agent. That which is habitually assailed with sneers and sarcasms cannot long survive. Institutions that have lost their roots in men's respect and faith are doomed; and the day of their dissolution is not far off. The time is approaching, then, when our system of social observances must pass through some crisis, out of which it will come purified and comparatively simple.

How this crisis will be brought about, no one can with any certainty say. Whether by the continuance and increase of individual protests, or whether by the union of many persons for the practice and propagation of some better system, the future alone can decide. The influence of dissentients acting without coöperation seems, under the present state of things, inadequate. Standing severally alone, and having no well-defined views; frowned on by conformists, and expostulated with even by those who secretly sympathize with them; subject to petty persecutions, and unable to trace any benefit produced by their example; they are apt, one by one, to give up their attempts as hopeless. The young convention-breaker eventually finds that he pays too heavily for his nonconformity. Hating, for example, everything that bears about it any remnant of servility, he determines, in the ardor of his independence, that he will uncover to no one. But what he means simply as a general

protest, he finds that ladies interpret into a personal disrespect. Though he sees that, from the days of chivalry downwards, these marks of supreme consideration paid to the other sex have been but a hypocritical counterpart to the actual subjection in which men have held them — a pretended submission to compensate for a real domination; and though he sees that when the true dignity of women is recognized, the mock dignities given to them will be abolished, yet he does not like to be thus misunderstood, and so hesitates in his practice.

In other cases, again, his courage fails him. Such of his unconventionalities as can be attributed only to eccentricity, he has no qualms about: for, on the whole, he feels rather complimented than otherwise in being considered a disregarder of public opinion. But when they are liable to be put down to ignorance, to ill-breeding, or to poverty, he becomes a coward. However clearly the recent innovation of eating some kinds of fish with knife and fork proves the fork-and-bread practice to have had little but caprice for its basis, yet he dares not wholly ignore that practice while fashion partially maintains it. Though he thinks that a silk handkerchief is quite as appropriate for drawing-room use as a white cambric one, he is not altogether at ease in acting out his opinion. Then, too, he begins to perceive that his resistance to prescription brings round disadvantageous results which he had not calculated upon. He had expected that it would save him from a great deal of social intercourse of a frivolous kind — that it would offend the fools, but not the sensible people; and so would serve as a self-acting test by which those worth knowing would be separated from those not worth knowing. But the fools prove to be so greatly in the majority that, by offending them, he closes against himself nearly all the avenues through which the sensible people are to be reached. Thus he finds that his nonconformity is frequently misinterpreted; that there are but few directions in which he dares to carry it consistently out; that the annoyances and disadvantages which it brings upon him are greater than he anticipated;

and that the chances of his doing any good are very remote. Hence he gradually loses resolution, and lapses, step by step, into the ordinary routine of observances.

Abortive as individual protests thus generally turn out, it may possibly be that nothing effectual will be done until there arises some organized resistance to this invisible despotism by which our modes and habits are dictated. It may happen that the government of Manners and Fashion will be rendered less tyrannical, as the political and religious governments have been, by some antagonistic union. Alike in Church and State, men's first emancipations from excess of restriction were achieved by numbers, bound together by a common creed or a common political faith. What remained undone while there were but individual schismatics or rebels was effected when there came to be many acting in concert. It is tolerably clear that these earliest installments of freedom could not have been obtained in any other way; for so long as the feeling of personal independence was weak and the rule strong, there could never have been a sufficient number of separate dissentients to produce the desired results. Only in these later times, during which the secular and spiritual controls have been growing less coercive, and the tendency towards individual liberty greater, has it become possible for smaller and smaller sects and parties to fight against established creeds and laws; until now men may safely stand even alone in their antagonism.

The failure of individual nonconformity to customs, as above illustrated, suggests that an analogous series of changes may have to be gone through in this case also. It is true that the *lex non scripta* differs from the *lex scripta* in this, that, being unwritten, it is more readily altered; and that it has, from time to time, been quietly ameliorated. Nevertheless, we shall find that the analogy holds substantially good. For in this case, as in the others, the essential revolution is not the substituting of any one set of restraints for any other, but the limiting or abolishing the authority which prescribes restraints. Just as the fundamental

change inaugurated by the Reformation was not a superseding of one creed by another, but an ignoring of the arbiter who before dictated creeds; just as the fundamental change which Democracy long ago commenced, was not from this particular law to that, but from the despotism of one to the freedom of all; so, the parallel change yet to be wrought out in this supplementary government of which we are treating is not the replacing of absurd usages by sensible ones, but the dethronement of that secret, irresponsible power which now imposes our usages, and the assertion of the right of all individuals to choose their own usages. In rules of living, a West-end clique is our Pope; and we are all papists, with but a mere sprinkling of heretics. On all who decisively rebel comes down the penalty of excommunication, with its long catalogue of disagreeable and, indeed, serious consequences.

The liberty of the subject asserted in our constitution, and ever on the increase, has yet to be wrested from this subtler tyranny. The right of private judgment, which our ancestors wrung from the church, remains to be claimed from this dictator of our habits. Or, as before said, to free us from these idolatries and superstitious conformities, there has still to come a protestantism in social usages. Parallel, therefore, as is the change to be wrought out, it seems not improbable that it may be wrought out in an analogous way. That influence which solitary dissentients fail to gain, and that perseverance which they lack, may come into existence when they unite. That persecution which the world now visits upon them from mistaking their nonconformity for ignorance or disrespect may diminish when it is seen to result from principle. The penalty which exclusion now entails may disappear when they become numerous enough to form visiting circles of their own. And when a successful stand has been made and the brunt of the opposition has passed, that large amount of secret dislike to our observances which now pervades society may manifest itself with sufficient power to effect the desired emancipation.

Whether such will be the process, time alone can decide. That community of origin, growth, supremacy, and decadence which we have found among all kinds of government suggests a community in modes of change also. On the other hand, Nature often performs substantially similar operations, in ways apparently different. Hence these details can never be foretold.

Society, in all its developments, undergoes the process of exuviation. These old forms which it successively throws off have all been once vitally united with it — have severally served us the protective envelopes within which a higher humanity was being evolved. They are cast aside only when they become hindrances — only when some inner and better envelope has been formed; and they bequeath to us all that there was in them of good. The periodical abolitions of tyrannical laws have left the administration of justice not only uninjured, but purified. Dead and buried creeds have not carried with them the essential morality they contained, which still exists, uncontaminated by the sloughs of superstition. And all that there is of justice and kindness and beauty, embodied in our cumbrous forms of etiquette, will live perennially when the forms themselves have been forgotten.

THE SCIENCE AND PHILOSOPHY OF RECREATION¹

GEORGE JOHN ROMANES

IN all places of the civilized world, and in all classes of the civilized community, the struggle for existence is now more keen than ever it has been during the history of our race. Everywhere men, and women, and children are living at a pressure positively frightful to contemplate. Amid the swarming bustle of our smoke-smothered towns, surrounded by their zone of poisoned trees, amid the whirling roar of machinery, the scorching blast of furnaces, and in the tallow-lighted blackness of our mines — everywhere, over all the length and breadth of this teeming land, men, and women, and children, in no metaphor, but in cruel truth, are struggling for life. Even our smiling landscapes support as the sons of their soil a new generation, to whom the freedom of gladness is a tradition of the past, and on whose brows is stamped, not only the print of honest work, but a new and saddening mark — the brand of sickening care. Or if we look to our universities and schools, to our professional men and men of business, we see this same fierce battle rage — ruined health and shattered hopes, tearful lives and early deaths being everywhere the bitter lot of millions who toil, and strive, and love, and bleed their young hearts' blood in sorrow. In such a world, and at such a time, when more truly than ever it may be said that the whole creation groans in pain and travail, I do not know that for the purposes of health and happiness there is any subject which it is more desirable that persons of all classes should understand than the philosophical theory and the rational practice of recreation. For recreation is the great relief from the

¹ Reprinted from *The Popular Science Monthly*, October, 1879.

pressure of life—the breathing space in the daily struggle for existence, without which no one of the combatants could long survive; and therefore it becomes of the first importance that the science and the philosophy of such relief should be generally known. No doubt it is true that people will always be compelled to take recreation and to profit by its use, whether or not they are acquainted with its science and its philosophy; but there can be equally little doubt that here, as elsewhere, an intelligent understanding of abstract principles as well as of practical applications will insure more use and less abuse of the thing which is thus intelligently understood.

With a view, then, of obtaining some such intelligent understanding of recreation, let us begin by clearly understanding what recreation means. First of all, the mere word, like many of our other English words that signify abstractions, condenses much philosophy within itself. For, as “creation” means a forming, “re-creation” means a forming anew; and, as in etymological derivation, so in actual truth, re-creation is nothing other than a re-novation of the vital energies; leisure time and appropriate employment serve to repair the organic machinery which has been impaired by the excess of work. The literal meaning of the word is therefore in itself instructive, as showing that what our forefathers saw in recreation was not so much play, pastime, or pleasantry, as the restoration of enfeebled powers of work. And I do not know that within the limits of one word they could have left us a legacy of thought more true in itself or more solemn in its admonition. Recreation is, *or ought to be*, not a pastime entered upon for the sake of the pleasure which it affords, but an act of duty undertaken for the sake of the subsequent power which it generates, and the subsequent profit which it insures. Therefore, expanding the philosophy which is thus condensed in our English word, we may define recreation as that which with the least expenditure of time renders the exhausted energies most fitted to resume their work. Such is my definition of recreation; yet I know that many things

are called by this name which cannot possibly fall within this definition, and I doubt whether nine persons out of ten ever dreamed either of attaching such a meaning to the word, or of applying such a principle to the thing. Nevertheless, I also know that in whatever degree so-called recreation fails to be covered by this definition, in that degree does it fail, properly speaking, to be recreation at all. It may be amusement, fun, or even profitable employment; but it is not that particular thing, which it is the object of this paper to consider. Therefore the definition which I have laid down may be taken as a practical test of recreation as genuine or spurious. If recreation is of a kind that renders a man less fitted for work than would some other kind of occupation, or if it consumes more time than would some other kind of occupation which would secure an equal amount of recuperation, then, in whatever degree this is so, in that degree must the quality of such recreation be pronounced impure.

So much, then, for the meaning of recreation. The next point that I shall consider is the physiology of recreation. It may have struck some readers as a curious question, why some actions or pursuits should present what I may call a recreative character, and others not. For it is evident that this character is by no means determined by the relief from *labor* which these actions or pursuits secure. A week on the moors involves more genuine hard work than does a week in the mines, and a game of chess may require as much effort of thought as a problem in high mathematics. Moreover, the same action or pursuit may vary in its recreative quality with different individuals. Rowing, which is the favorite recreation of the undergraduate, is serious work to the bargeman; and we never find a gardener to resemble his master in showing a partiality to digging for digging's sake. If it is suggested that it is the need of bodily exercise which renders muscular activity beneficial to the one class and not to the other, I answer, no doubt it is so partly, but not wholly; for why is it that a man of science should find recreation

in reading history, while an historian finds recreation in the pursuit of science? Or why is it that a London tradesman should find a beneficial holiday in the country, while a country tradesman finds a no less beneficial holiday in London? The truth seems to me to be that the only principle which will serve to explain the recreative quality in all cases is what I may call the physiological necessity for frequent change of organic activity, and the consequent physiological value of variety in the kinds and seasons of such activity. In order to render this principle perfectly clear, it will be necessary for me very briefly to explain the physiology of nutrition.

When food is taken into the body it undergoes a variety of processes which are collectively called digestion and assimilation. Into the details of these processes I need not enter, it being enough for my present purpose to say that the total result of these processes is to strain off the nutritious constituents of the food, and pour them into the current of the blood. The blood circulates through nearly all the tissues of the body, being contained in a closed system of tubes. This system of tubes springs from the heart in the form of large, hollow trunks which ramify into smaller and smaller tube-branches. These are all called arteries. The smaller arteries again ramify into a countless meshwork of so-called capillaries. Capillaries are also closed tubes, but differ from arteries in being immensely more numerous, more slender, and more tenuous in their walls. These capillaries pervade the body in such an intimate meshwork that a needle's point cannot be run into any part of the body where they occur without destroying the integrity of some of them, and so causing an outflow of blood.

As these capillaries ramify from the arteries, so do they again coalesce into larger tubes, and these into larger, and so on, until all this system of return tubing ends again in the heart in the form of large, hollow trunks. The tubes composing this system of return tubing are called the veins. Thus the whole blood-vascular system may be likened to two trees which are

throughout joined together by their leaves, and also by cavities at the bottoms of their trunks — the heart. The branches of both trees being everywhere hollow, the contained fluid runs up the stem, and through smaller and smaller branches of the arterial tree, into the delicate vessels of the leaves, which may be taken to represent the capillaries. Passing through these into the twigs of the venous tree, the blood returns through larger and larger branches of this tree till it arrives at the trunk, and completes its circuit by again entering the trunk of the arterial tree through the cavities of the heart. Now the blood, in perpetually making this complete circuit of the body, performs three important functions: it serves to carry oxygen from the lungs to all the other parts of the body; it serves to supply all parts of the body with the nutritive material with which it is charged; and it serves to drain off from all the tissues of the body the effete products which they excrete, and to present these effete products to the organs whose function it is again to abstract them from the blood and expel them from the body. The two latter functions of the blood — those of nourishing and draining — I must consider more in detail. They are both performed in the capillaries, so that the object of the arteries and veins may be considered as merely that of conveying the blood to and from the capillaries. Moreover, both functions are performed by transfusion through the delicate walls of the capillaries — the nutritive material in the blood being thus transfused into the surrounding tissues, and the waste product of these tissues being transfused into the blood. Thus, in the various vascular tissues there is always a double process going on: first, that of receiving nourishment from the blood, whereby they are being constantly built up into an efficient state for the performance of their various functions; and, secondly, that of discharging into the blood the effete materials which the performance of these functions entails. Now, when any tissue or organ is in a state of activity in the performance of its function, the activity which it manifests entails a process of disintegration,

which is the reverse of the process of nutrition; that is to say, when a tissue or organ is doing its work, it is expending energy which it has previously derived in virtue of the process of nutrition. Work is therefore, so to speak, the using up of nutrition; so that if the income of energy due to nutrition is equal to the expenditure of energy due to work, the tissue or organ will remain stationary as regards its capacity for further work, while, if the work done is in excess of the nutrition supplied, the tissue or organ will soon be unable to continue its work; it will become, as we say, exhausted, cease to work, and remain passive until it is again slowly and gradually refreshed or built up by the process of nutrition. Therefore all the tissues and organs of the body require periods of rest to alternate with periods of activity; and what is true of each part of the body is likewise true of the body as a whole — sleep being nothing other than a time of general rest during which the process of nutrition is allowed to gain upon that of exhaustion. Thus we may have local exhaustion — as when the muscles of our arm are no longer able to hold out a heavy weight — or we may have general exhaustion, as in sleep; and we may have local restorations due to nutrition — as when our exhausted arm, after some interval of rest, is again able to sustain the weight — or we may have a general restoration due to nutrition, as in the effects of sleep.

I have now said enough about the physiology of nutrition to render quite clear what I mean by recreation depending on the physiological necessity for a frequent change of organic activity. For although in the case of some organs — such as most of the secreting organs — activity is pretty constant, owing to the constant expenditure of energy being just about balanced by the constant income, in the case of nerves and muscles this is not so; during the times when these organs are in activity their expenditure of energy is so vastly greater than their income during the same times, that they can only do their work by drawing upon the stores of energy which have been laid up by them during the comparatively long periods of their

previous rest. Now, recreation applies only to nerve and muscle; and what it amounts to is simply this—a change of organic activity, having for its object the affording of time for the nutrition of exhausted portions of the body. A part of the body having become exhausted by work done, and yet the whole of the body not being exhausted so far as to require sleep, recreation is the affording of local sleep to the exhausted part by transferring the scene of activity from it to some other part. Be it observed that a certain amount of activity is necessary for the life and health of all the organs of the body; so it would not do for the community of organs as a whole that, when any one set become exhausted by their own activity, all the others should share in their time of rest, as in general sleep. But, by transferring the state of activity from organs already exhausted by work to organs which are ready nourished to perform work, recreation may be termed, as I have said, local sleep.

Thus we see that, in a physiological no less than in a psychological sense, the term re-creation is a singularly happy one; for we see that, as a matter of fact, the whole physiology of recreation consists merely of a re-building up, re-forming, or re-creation of tissues which have become partly broken down by the exhausting effects of work. So that in this physiological sense recreation is partial sleep, while sleep is universal recreation. And now we see why it is that the one essential principle of all recreation must be that of variety of organic activity; for variety of organic activity merely means the substitution of one set of organic activities for another, and consequently the successive affording of rest to bodily structures as they are successively exhausted. The undergraduate finds recreation in rowing because it gives his brain time to recover its exhausted energies, while the historian and the man of science find recreation in each other's labors because these labors require somewhat different faculties of mind for their pursuance.

Before concluding these general remarks on the physiology of recreation, I must say a few words with more special reference

to the physiology of exercise. We do not require science to teach us that the most lucrative form of recreation for those whose labor is not of a bodily kind is muscular exercise. Why this should be so is sufficiently obvious. The movement of blood in the veins is due to two causes.

The act of drawing breath into the lungs, by dilating the closed cavity of the chest, serves also to draw venous blood into the heart. This cause of the onward movement of blood in the veins is what is called aspiration, and it occurs also in some of the larger veins of the limbs, which are so situated with reference to their supplying branches that movement of the limbs determines suction of the blood from the supplying branches to the veins. The second great cause of the venous flow is as follows. The larger veins are nearly all provided with valves which open to allow the blood to pass on toward the heart, but close against the blood if it endeavors to return back toward the capillaries. Now, the larger veins are imbedded in muscles, so that the effect of muscular contractions is to compress numberless veins now in one part and now in another part of their length; and, as each vein is thus compressed, its contained fluid is, of course, driven forward from valve to valve. Hence, as all the veins of the body end in the heart, the total effect of general muscular activity is greatly to increase the flow of venous blood into the heart. The heart is thus stimulated to greater activity in order to avoid being gorged with the unusual inflow of blood. So great is the increase of the heart's activity that is required to meet this sudden demand on its powers of propulsion, that everyone can feel in his own person how greatly muscular exercise increases the number of the heart's contractions. Now, the result of this increase of the heart's activity is, of course, to pump a correspondingly greater amount of blood into the arteries, and so to quicken the circulation all over the body. This, in turn, gives rise to a greater amount of tissue-change — oxygenation, nutrition, and drainage — which, together with the increased discharge of carbonic acid by the muscles during

their time of increased activity, has the effect of unduly charging the blood with carbonic acid and other effete materials. This increased amount of carbonic acid in the blood stimulates the respiratory center in the spinal cord to increase the frequency of the respiratory movements, so that under the influence of violent and sustained exercise we become, as it is expressly said, "out of breath." The distress to which this condition may give rise is, however, chiefly due to the heart being unable to deliver blood into the arteries as quickly as it receives blood from the veins; the result being a more or less undue pressure of venous blood upon a heart already struggling to its utmost to pump on all the blood it can. Training, which is chiefly systematic exercise, by prompting a healthy concordant action between the heart and arteries, diminishes the resistance which the latter offer to an unusual flow of blood from the former, and therefore men in training, or men accustomed to bodily exercise, do not easily become distressed by sustained muscular exertion.

Now it is evident, without comment, how immense must be the benefit of muscular exercise. Not only does it allow time for the brain to rest when exhausted by mental work, but, by increasing the circulation all over the body, it promotes the threefold function of oxygenation, nutrition, and drainage. It thus refreshes the whole organism in all its parts; it increases by use the strength and endurance of the muscles; it maintains the heart and the lungs — or rather the whole of the circulatory and respiratory mechanisms — at the highest point of their natural efficiency; and, in general, next only to air and food, muscular exercise is of all things most essential to the vitality of the organism.

So much, then, for the physiology of recreation; and having said this much on the abstract principles of our subject, I shall devote the rest of my paper to a consideration of this subject in its more practical aspects.

The fundamental principle of all recreation consisting, as I have said, in the rest from local exhaustion which is secured

by a change of organic activity, it is clear that practical advice with regard to recreation must differ widely according to the class, and even the individual, to which it is given. Thus it would be clearly absurd to recommend a literary man, already jaded with mental work, to adopt as his means of recreation some sedentary form of amusement; while it would be no less absurd to recommend a workingman, already fatigued with bodily toil, to regale himself with athletics. And, in lower degrees, the kind and amount of recreation which it would be wise to recommend must differ with different individuals in the same class of society, according to their age, sex, temperament, pursuits, and previous habits of life. But, although all matters of detail thus require to be adjusted to individual cases, there is one practical consideration which applies equally to all cases, and which must never be lost sight of if recreation of any kind is to produce its fullest measure of result. This consideration is the all-important part which is played in recreation by the emotions. It is, I am sure, impossible to overestimate the value of the emotions in this connection — a prolonged flow of happy feelings doing more to brace up the system for work than any other influence operating for a similar length of time. The physiological reasons why this should be so are not apparent; for, although we know that the emotions have a very powerful influence in stimulating the nerves which act on the various secreting organs of the body, I do not think that this fact alone is sufficient to explain the high value of pleasurable emotions in refreshing the nervous system. There must be some further reason — probably to be sought for within the limits of the nervous system itself — why a flow of happy feelings serves to re-create the nervous energies. But, be the reasons what they may, we must never neglect to remember the fact that the influence of all others most detrimental to recreation is the absence of agreeable emotions or the presence of painful ones. There is, for instance, comparatively little use in taking so-called constitutional exercise at stated times, if the mind during these

times is emotionally colorless, or, still worse, aching with sorrow and care. If recreation is to be of good quality, it must before all things be of a kind to stimulate pleasurable feelings, and while it lasts it ought to engross the whole of our consciousness. Half-hearted action is quite as little remunerative here as elsewhere; and, if we desire to work well, no less in play than in work must we fulfill the saying, "What thy hand findeth to do, do it with thy might."

Health may be taken as implying capacity for work, as well as to a large though to a less absolute degree, the capacity for happiness; and, as duty means our obligation to promote the general happiness, it follows that in no connection is the voice of duty more urgent than it is in the advancement of all that is conducive to health. By maintaining our own health at the highest point of its natural efficiency, we are doing all that in us lies to secure for ourselves the prime condition for work — that is, the prime condition for benefiting the community to whatever extent our powers may be capable. And, similarly, by promoting the health of others, we are, in proportion to our success, securing to the community a certain amount of additional capacity for work on the part of its constituent members, as well as increasing the individual capacity for happiness on the part of all the members whom our efforts may reach. Therefore, I take it that if we regard this subject from an ethical point of view, it is clear that we have no duty to perform of a more grave and important kind than this — thoughtfully to study the conditions of health, earnestly to teach these conditions to others, and strenuously to make their observance a law to ourselves. Now, of these conditions one of the most important is suitable recreation. For this is the condition which extends to all classes of the community, and the observance of which is, as we have seen, an imperative necessity to every individual who desires to possess a sound working mind in a sound working body. Hence I do not hesitate to say that one of our most weighty duties in life is to ascertain the kinds and degrees of recreation

which are most suitable to ourselves or to others, and then with all our hearts to utilize the one, while with all our powers we encourage the other. Be it remembered that by recreation I mean only that which with the least expenditure of time renders the exhausted energies most fitted to resume their work; and be it also remembered that recreation is necessary not only for maintaining our powers of work so far as these are dependent on our vitality, but also for maintaining our happiness so far as this is dependent on our health. Remembering these things, I entertain no fear of contradiction when I conclude that, whether we look to the community as a whole, or restrict our view to our own individual selves, we have no duty to discharge of a more high and serious kind than this — rationally to understand and properly to apply the principles of all that in the full but only legitimate sense of the word we call recreation. Again, therefore, I say, if we know these things, happy are we if we do them. And if we desire to do them — if as rational and moral creatures we desire to obey the most solemn injunction that ever fell from human lips, "Work while it is day" — we must remember that the daylight of our life may be clouded by our folly or shortened by our sin; that the work which we may hope to do we shall be enabled to do only by hearkening to that Wisdom who holdeth in her right hand length of days, in her left hand riches and honor; and that at last, when all to us is dark with the darkness of an unknown night, such Wisdom will not have cried to us in vain, if she has taught us how to sow most plenteously a harvest of good things that our children's children are to reap.

THE ENTHUSIASM OF HUMANITY¹

JOHN ROBERT SEELEY

THE first method of training this passion which Christ employed was the direct one of making it a point of duty to feel it. To love one's neighbor as oneself was, he said, the first and greatest *law*. And in the Sermon on the Mount he requires the passion to be felt in such strength as to include those whom we have most reason to hate — our enemies and those who maliciously injure us — and delivers an imperative precept, "Love your enemies."

It has been shown that to do this is not, as might at first appear, in the nature of things impossible, but the further question suggests itself, Can it be done to order? Has the verb to love really an imperative mood? Certainly, to say that we can love at pleasure, and by a mere effort of will summon up a passion which does not arise of itself, is to take up a paradoxical and novel position. Yet if this position be really untenable, how is it possible to obey Christ's commands?

The difficulty seems to admit of only one solution. We are not commanded to create by an effort of will a feeling of love in ourselves which otherwise would have had no existence; the feeling must arise naturally or it cannot arise at all. But a number of causes which are removable may interfere to prevent the feeling from arising or to stifle it as it arises, and we are commanded to remove these hindrances. It is natural to man to love his kind, and Christ commands us only to give nature play. He does not expect us to procure for ourselves hearts of some new supernatural texture, but merely the heart of flesh for the heart of stone.

¹ Chapter XIV of *Ecce Homo*, 1865.

What, then, are the causes of this paralysis of the heart? The experience of human life furnishes us readily with the answer. It constantly happens that one whose affections were originally not less lively than those of most men is thrown into the society of persons destitute of sympathy or tenderness. In this society each person is either totally indifferent to his neighbor or secretly endeavoring to injure or overreach him. The newcomer is at first open-hearted and cordial; he presumes everyone he meets to be a friend and is disposed to serve and expects to be served by all like. But his advances are met by some with cautious reserve, by others with icy coldness, by others with hypocritical warmth followed by treacherous injury, by others with open hostility. The heart which naturally grew warm at the mere sight of a human being, under the operation of this new experience slowly becomes paralyzed. There seats itself gradually in the man's mind a presumption concerning every new face that it is the face of an enemy, and a habit of gathering himself into an attitude of self-defense whenever he deals with a fellow-creature. If when this new disposition has grown confirmed and habitual, he be introduced into a society of an opposite kind and meet with people as friendly and kind as he himself was originally, he will not at first be able to believe in their sincerity, and the old kindly affections from long disuse will be slow to rouse themselves within him. Now to such a person the imperative mood of the verb to love may fairly be used. He may properly be told to make an effort, to shake off the distrust that oppresses him, — not to suffer unproved suspicions, causeless jealousies, to stifle by the mere force of prejudice and mistaken opinion the warmth of feeling natural to him.

But we shall have a closer illustration if we suppose the cold-hearted society itself to be addressed by a preacher who wishes to bring them to a better mind. He too may fairly use the imperative mood of the verb to love. For he may say, "Your mutual coldness does not spring from an original want of the power of sympathy. If it did, admonitions would indeed be

useless. But it springs from a habit of thought which you have formed, a maxim which has been received among you, that all men are devoted to self-interest, that kindness is but feebleness and invites injury. If you will at once and by a common act throw off this false opinion of human nature, and adopt a new plan of life for yourselves and new expectations of each other, you will find the old affections natural to all of you, weakened indeed and chilled, but existing and capable of being revived by an effort."

Such a preacher might go further and say, "If but a small minority are convinced by my words, yet let that minority for itself abandon the selfish theory, let it renounce the safety which that theory affords in dealing with selfish men, let it treat the enemy as if he were indeed the friend he ought to be, let it dare to forego retaliation and even self-defense. By this means it will shame many into kindness; by despising self-interest for itself it will sometimes make it seem despicable to others; by sincerity and persistency it will gradually convert the majority to a higher law of intercourse.

The world has been always more or less like this cold-hearted society; the natural kindness and fellow-feeling of men have always been more or less repressed by low-minded maxims and cynicism. But in the time of Christ, and in the last decrepitude of ethnic morality, the selfishness of human intercourse was much greater than the present age can easily understand. That system of morality, even in the times when it was powerful and in many respects beneficial, had made it almost as much a duty to hate foreigners as to love fellow-citizens. Plato congratulates the Athenians on having shown in their relations to Persia, beyond all the other Greeks, "a pure and heartfelt hatred of the foreign nature."¹ Instead of opposing, it had sanctioned and consecrated the savage instinct which leads us to hate whatever is strange or unintelligible, to distrust those who live on the further side of a river, to suppose that those whom we hear talk-

¹ Plato, *Menexenus*. — Author's note.

ing together in a foreign tongue must be plotting some mischief against ourselves. The lapse of time and the fusion of races doubtless diminished this antipathy considerably, but at the utmost it could but be transformed into an icy indifference, for no cause was in operation to convert it into kindness. On the other hand, the closeness of the bond which united fellow-citizens was considerably relaxed. Common interests and common dangers had drawn it close; these in the wide security of the Roman Empire had no longer a place. It had depended upon an imagined blood-relationship; fellow-citizens could now no longer feel themselves to be united by the tie of blood. Every town was full of resident aliens and emancipated slaves, persons between whom and the citizens nature had established no connection, and whose presence in the city had originally been barely tolerated from motives of expediency. The selfishness of modern times exists in defiance of morality, in ancient times it was approved, sheltered, and even in part enjoined by morality.

We are therefore to consider the ancient world as a society of men in whom natural humanity existed but had been, as it were, crusted or frosted over. Inveterate feuds and narrow-minded local jealousies, arising out of an isolated position or differences of language and institutions, had created endless divisions between man and man. And as the special virtues of antiquity, patriotism and all that it implies, had been in a manner caused and fostered by these very divisions, they were not regarded as evils but rather cherished as essential to morality. Selfishness, therefore, was not a mere abuse or corruption arising out of the infirmity of human nature, but a theory and almost a part of moral philosophy. Humanity was cramped by a mistaken prejudice, by a perverse presumption of the intellect. In a case like this it was necessary and proper to prescribe humanity by direct authoritative precept. Such a precept would have been powerless to create the feeling, nor would it have done much to protect it from being overpowered by the opposite passion, but the opposite passion of selfishness was at this period justified by authority

and claimed to be on the side of reason and law. Precept is fairly matched against precept, and what the law of love and the golden rule did for mankind was to place for the first time the love of man as man distinctly in the list of virtues, to dissipate the exclusive prejudices of ethnic morality, and to give selfishness the character of sin.

When a theory of selfishness is rife in a whole community, it is a bold and hazardous step for a part of the community to abandon it. For in the society of selfish people selfishness is simply self-defense; to renounce it is to evacuate one's entrenched position, to surrender at discretion to the enemy. If society is to disarm, it should do so by common consent. Christ, however, though he confidently expected ultimately to gather all mankind into his society, did not expect to do so soon. Accordingly he commands his followers not to wait for this consummation but, in spite of the hazardous nature of the step, to disarm at once. They are sent forth "as sheep in the midst of wolves." Injuries they are to expect, but they are neither to shun nor to retaliate them. Harmless they are to be as *doves*. The discipline of suffering will wean them more and more from self, and make the channels of humanity freer within them; and sometimes their patience may shame the spoiler; he may grow weary of rapacity which meets with no resistance, and be induced to envy those who can forego without reluctance that which he devotes every thought to acquire.

But we shall soon be convinced that Christ could not design by a mere edict, however authoritative, to give this passion of humanity strength enough to make it a living and infallible principle of morality in every man, when we consider, first, what an ardent enthusiasm he demanded from his followers, and secondly, how frail and tender a germ this passion naturally is in human nature. Widely diffused indeed it is, and seldom entirely eradicated; but for the most part, at least in the ancient world, it was crushed under a weight of predominant passions and interests; it had seldom power enough to dictate any action,

but made itself felt in faint misgivings and relentings, which sometimes restrained men from extremes of cruelty. Like Enceladus under *Ætna*, it lay fettered at the bottom of human nature, now and then making the mass above it quake by an uneasy change of posture. To make this outraged and enslaved passion predominant, to give it, instead of a veto rarely used, the whole power of government, to train it from a dim misgiving into a clear and strong passion, required much more than a precept. The precept had its use; it could make men feel it right to be humane and desire to be so, but it could never inspire them with an enthusiasm of humanity. From what source was this inspiration to be derived?

Humanity, we have already observed, is neither a love for the whole human race, nor a love for each individual of it, but a love for the race, or for the ideal of man, in each individual. In other and less pedantic words, he who is truly humane considers every human being as such, interesting and important, and without waiting to criticise each individual specimen, pays in advance to all alike the tribute of good wishes and sympathy. Now this favorable presumption with regard to human beings is not a causeless prepossession, it is no idle superstition of the mind, nor is it a natural instinct. It is a feeling founded on the actual observation and discovery of interesting and noble qualities in particular human beings, and it is strong or weak in proportion as the person who has the feeling has known many or few noble and amiable human beings. There are men who have been so unfortunate as to live in the perpetual society of the mean and the base; they have never, except in a few faint glimpses, seen anything glorious or good in human nature. With these the feeling of humanity has a perpetual struggle for existence, their minds tend by a fatal gravitation to the belief that the happiness or misery of such a paltry race is wholly unimportant; they may arrive finally at a fixed condition, in which it may be said of them, without qualification, that "man delights not them, nor

woman neither." In this final stage they are men who, beyond the routine of life, should not be trusted, being "fit for treasons, stratagems, and spoils." On the other hand, there are those whose lot it has been from earliest childhood to see the fair side of humanity, who have been surrounded with clear and candid countenances, in the changes of which might be traced the working of passions strong and simple, the impress of a firm and tender nature, wearing when it looked abroad the glow of sympathy, and when it looked within the bloom of modesty. They have seen, and not once or twice, a man forget himself; they have witnessed devotion, unselfish sorrow, unaffected delicacy, spontaneous charity, ingenuous self-reproach; and it may be that on seeing a human being surrender for another's good not something but his uttermost all, they have dimly suspected in human nature a glory connecting it with the divine. In these the passion of humanity is warm and ready to become on occasion a burning flame; their whole minds are elevated, because they are possessed with the dignity of that nature they share, and of the society in the midst of which they move.

But it is not absolutely necessary to humanity that a man shall have seen *many* men whom he can respect. The most lost cynic will get a new heart by learning thoroughly to believe in the virtue of *one* man. Our estimate of human nature is in proportion to the best specimen of it we have witnessed. This, then, it is which is wanted to raise the feeling of humanity into an enthusiasm; when the precept of love has been given, an image must be set before the eyes of those who are called upon to obey it, an ideal or type of man which may be noble and amiable enough to raise the whole race and make the meanest member of it sacred with reflected glory.

Did not Christ do this? Did the command to love go forth to those who had never seen a human being they could revere? Could his followers turn upon him and say, How can we love a creature so degraded, full of vile wants and contemptible

passions, whose little life is most harmlessly spent when it is an empty round of eating and sleeping; a creature destined for the grave and for oblivion when his allotted term of fretfulness and folly has expired? Of this race Christ himself was a member, and to this day is it not the best answer to all blasphemers of the species, the best consolation when our sense of its degradation is keenest, that a human brain was behind his forehead and a human heart beating in his breast, and that within the whole creation of God nothing more elevated or more attractive has yet been found than he? And if it be answered that there was in his nature something exceptional and peculiar, that humanity must not be measured by the stature of Christ, let us remember that it was precisely thus that he wished it to be measured, delighting to call himself the Son of Man, delighting to call the meanest of mankind his brothers. If some human beings are abject and contemptible, if it be incredible to us that they can have any high dignity or destiny, do we regard them from so great a height as Christ? Are we likely to be more pained by their faults and deficiencies than he was? Is our standard higher than his? And yet he associated by preference with these meanest of the race; no contempt for them did he ever express, no suspicion that they might be less dear than the best and wisest to the common Father, no doubt that they were naturally capable of rising to a moral elevation like his own. There is nothing of which a man may be prouder than of this; it is the most hopeful and redeeming fact in history; it is precisely what was wanting to raise the love of man as man to enthusiasm. An eternal glory has been shed upon the human race by the love Christ bore to it. And it was because the Edict of Universal Love went forth to men whose hearts were in no cynical mood but possessed with a spirit of devotion to a man, that words which at any other time, however grandly they might sound, would have been but words, penetrated so deeply, and along with the law of love the power of love was given. Therefore also the first Christians

were enabled to dispense with philosophical phrases, and instead of saying that they loved the ideal of man in man, could simply say and feel that they loved Christ in every man.

We have here the very kernel of the Christian moral scheme. We have distinctly before us the end Christ proposed to himself, and the means he considered adequate to the attainment of it. His object was, instead of drawing up, after the example of previous legislators, a list of actions prescribed, allowed, and prohibited, to give his disciples a universal test by which they might discover what it was right and what it was wrong to do. Now as the difficulty of discovering what is right arises commonly from the prevalence of self-interest in our minds, and as we commonly behave rightly to anyone for whom we feel affection or sympathy, Christ considered that he who could feel sympathy for all would behave rightly to all. But how to give to the meager and narrow hearts of men such enlargement? How to make them capable of a universal sympathy? Christ believed it possible to bind men to their kind, but on one condition — that they were first bound fast to himself. He stood forth as the representative of men, he identified himself with the cause and with the interests of all human beings, he was destined, as he began before long obscurely to intimate, to lay down his life for them. Few of us sympathize originally and directly with this devotion; few of us can perceive in human nature itself any merit sufficient to evoke it. But it is not so hard to love and venerate him who felt it. So vast a passion of love, a devotion so comprehensive, elevated, deliberate, and profound, has not elsewhere been in any degree approached save by some of his imitators. And as love provokes love, many have found it possible to conceive for Christ an attachment the closeness of which no words can describe, a veneration so possessing and absorbing the man within them, that they have said, "I live no more, but Christ lives in me." Now such a feeling carries with it of necessity the feeling of love for all human beings. It matters no longer

what quality men may exhibit; amiable or unamiable, as the brothers of Christ, as belonging to his sacred and consecrated kind, as the objects of his love in life and death, they must be dear to all to whom he is dear. And those who would for a moment know his heart and understand his life must begin by thinking of the whole race of man, and of each member of the race, with awful reverence and hope.

Love, wheresoever it appears, is in its measure a law-making power. "Love is *dutiful* in thought and deed." And as the lover of his country is free from the temptation to treason, so is he who loves Christ secure from the temptation to injure any human being, whether it be himself or another. He is indeed much more than this. He is bound and he is eager to benefit and bless to the utmost of his power all that bear his Master's nature, and that not merely with the good gifts of the earth, but with whatever cherishes and trains best the Christ within them. But for the present we are concerned merely with the power of this passion to lift the man out of sin. The injuries he committed lightly when he regarded his fellow-creatures simply as animals who added to the fierceness of the brute an ingenuity and forethought that made them doubly noxious, become horrible sacrilege when he sees in them no longer the animal but the Christ. And that other class of crimes which belongs more especially to ages of civilization, and arises out of a cynical contempt for the species, is rendered equally impossible to the man who hears with reverence the announcement, "The good deeds you did to the least of these my brethren you did to me."

There are two objections which may suggest themselves at this point, the one to intellectual, the other to practical men. The intellectual man may say, "To discover what it is right to do in any given case is not the province of any feeling or passion, however sublime, but requires the application of the same intellectual power which solves mathematical problems. The common acts of life may no doubt be performed correctly

by unintellectual people, but this is because these constantly recurring problems have been solved long ago by clever people, and the vulgar are now in possession of the results. Whenever a new combination occurs it is a matter for casuists; the best intentions will avail little; there is doubtless a great difference between a good man and a bad one; the one will do what is right when he knows it, and the other will not; but in respect for the power of ascertaining what it is right to do, supposing their knowledge of casuistry to be equal, they are on a par. Goodness or the passion of humanity, or Christian love, may be a motive inducing men to keep the law, but it has no right to be called the law-making power. And what has Christianity added to our theoretic knowledge of morality? It may have made men practically more moral, but has it added anything to Aristotle's *Ethics*?"

Certainly Christianity has no ambition to invade the provinces of the moralist or the casuist. But the difficulties which beset the discovery of the right moral course are of two kinds. There are the difficulties which arise from the blinding and confusing effect of selfish passions, and which obscure from the view the end which should be aimed at in action; when these have been overcome there arises a new set of difficulties concerning the means by which the end should be attained. In dealing with your neighbor the first thing to be understood is that his interest is to be considered as well as your own; but when this has been settled, it remains to be considered what his interest is. The latter class of difficulties requires to be dealt with by the intellectual or calculating faculty. The former class can only be dealt with by the moral force of sympathy. Now it is true that the right action will not be performed without the operation of both these agencies. But the moral agency is the dominant one throughout; it is that without which the very conception of law is impossible; it overcomes those difficulties which in the vast majority of practical cases are the most serious. The calculating casuistical faculty is,

as it were, in its employ, and it is no more improper to call it the law-making power, although it does not ultimately decide what action is to be performed, than to say that a house was built by one who did not with his own hands lay the bricks and spread the mortar.

The objection which practical men take is a very important one, as the criticisms of such men always are, being founded commonly upon large observation and not perverted by theory. They say that the love of Christ does not in practice produce the nobleness and largeness of character which has been represented as its proper and natural result; that instead of inspiring those who feel it with reverence and hope for their kind, it makes them exceedingly narrow in their sympathies, disposed to deny and explain away even the most manifest virtues displayed by men, and to despair of the future destiny of the great majority of their fellow-creatures; that instead of binding them to their kind, it divides them from it by a gulf which they themselves proclaim to be impassable and eternal, and unites them only in a gloomy conspiracy of misanthropy with each other; that it is indeed a law-making power, but that the laws it makes are little-minded and vexatious prohibitions of things innocent, demoralizing restraints upon the freedom of joy and the healthy instincts of nature; that it favors hypocrisy, moroseness, and sometimes lunacy; that the only vice it has power to check is thoughtlessness, and its only beneficial effect is that of forcing into activity, though not always into healthy activity, the faculty of serious reflection.

This may be a just picture of a large class of religious men, but it is impossible in the nature of things that such effects should be produced by a pure personal devotion to Christ. We are to remember that nothing has been subjected to such multiform and grotesque perversion as Christianity. Certainly the direct love of Christ, as it was felt by its first followers, is a rare thing among modern Christians. His character has been so much obscured by scholasticism as to have lost in a

great measure its attractive power. The prevalent feeling towards him now among religious men is an awful fear of his supernatural greatness, and a disposition to obey his commands arising partly from dread of future punishment and hope of reward, and partly from a nobler feeling of loyalty, which, however, is inspired rather by his office than his person. Beyond this we may discern in them an uneasy conviction that he requires a more personal devotion, which leads to spasmodic efforts to kindle the feeling by means of violent raptures of panegyric and by repeating over and getting by rote the ardent expressions of those who really had it. That is wanting for the most part which Christ held to be all in all, spontaneous warmth, free and generous devotion. That the fruits of a Christianity so hollow should be poor and sickly is not surprising.

But that Christ's method, when rightly applied, is really of mighty force may be shown by an argument which the severest censor of Christians will hardly refuse to admit. Compare the ancient with the modern world: "Look on this picture and on that." One broad distinction in the characters of men forces itself into prominence. Among all the men of the ancient heathen world there were scarcely one or two to whom we might venture to apply the epithet "holy." In other words, there were not more than one or two, if any, who besides being virtuous in their actions were possessed with an unaffected enthusiasm of goodness, and besides abstaining from vice regarded even a vicious thought with horror. Probably no one will deny that in Christian countries this higher-toned goodness, which we call holiness, has existed. Few will maintain that it has been exceedingly rare. Perhaps the truth is that there has scarcely been a town in any Christian country since the time of Christ where a century has passed without exhibiting a character of such elevation that his mere presence has shamed the bad and made the good better, and has been felt at times like the presence of God Himself. And if this be so, has Christ failed? or can Christianity die?

ON RESPONSIBILITY¹

JOHN GRIER HIBBEN

THERE is much loose and confused thinking about the nature of responsibility. Not only are there innumerable instances of persons holding positions of trust who are evading evident responsibilities, but also of those who would seek to justify themselves in such a course. The latter are like the figures in Nast's famous cartoon of the Tweed Ring, who are all standing in a circle, and each one pointing aside with his thumb to his neighbor as the responsible person. It is the old story of the other man. There are many circumstances in life where it is convenient to shift the responsibility upon some one else; and whenever one sets himself to defend a convenient course of action, he cannot always see straight and think clear. Even though he may succeed in convincing himself, nevertheless if in this process there is any element of self-deception, he is perilously near the danger line.

There are no fallacies so subtle as those which insinuate themselves into our reasonings at a time when our interests are involved. Therefore, when we seek to free ourselves of the burden of responsibility in any situation, we must be peculiarly on guard that we do not allow ourselves to become ensnared in the toils of those artificial distinctions and plausible explanations which, when stripped of their verbal dress, appear in their nakedness as contemptible subterfuges.

One of these convenient ideas which serve as a kind of natural anæsthetic to conscience is the belief that any responsibility

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which is divided is thereby lessened. The director of a corporation may content himself with the comforting thought that where many are jointly responsible his share of the common obligation after all cannot be regarded as very serious. And it is in this idea that a very fundamental error lies. For responsibility is by its nature something intensive and not extensive. It can be divided among many, but it is not thereby diminished in degree. On the other hand, when by the ordinary processes of arithmetical division one number is divided by another, the result is only a small part of the original amount. It is always a lessening process. But the idea of responsibility cannot be expressed in any such quantitative terms. Dividends can be divided into separate parts, but responsibility cannot. Responsibility can never be conceived in the light of a magnitude. It belongs to the class of things in which, when divided, each part is equal to the whole.

Responsibility in this respect is like pleasure which, when shared, is not lessened, but the rather increased, as Bacon long ago pointed out. The same quality we find in the rewards of honor, or of fame it may be, which come to the many who have served in a common cause and rejoice in a common victory. Thus the glory of the whole is each one's share. It can be divided among many without loss. So, also, the appreciation of beauty in nature or in art shows no diminishing returns, although the number who experience the joy of it may be increased without limit. This, also, is the characteristic feature of responsibility. Parents share the responsibility of their child, but the complete responsibility and no half measure of it rests upon each. The director of a bank or an insurance company shares the responsibility of his position with his colleagues on the same board; but the shared responsibility is not a per capita portion, but the whole.

This is not a new doctrine; it comes to us with an immemorial sanction. But it seems to have been forgotten in recent years. "My share of the responsibility is but slight," is a common

phrase which may be heard on all sides at the present day. If one would thus seek to minimize his sense of obligation as regards that which may be placed in his keeping as a trust, he should not forget that his share of responsibility is not a part, but the whole, undiminished and untransferable. He may have others associated with him, it is true, but his individual responsibility cannot be shifted upon them. He must meet it in the full rigor of its demands, and regard himself as though alone in the discharge of his duties.

There is also the fallacy of the delegated responsibility. It is impossible for one at the head of large business interests, for instance, to give his personal attention to every minute detail. He finds himself naturally compelled to delegate much of the work of supervision and of administration to others who act in the capacity of his deputies. Otherwise the business of life would be impossible. This is indeed a commonplace of everyday business routine. But because some one else may assume the responsibility, he is not wholly relieved of it. He passes on the duty of actually performing some specific work, and yet the obligation still rests with him not to do the task, it is true, but at least to see that it is done. We cannot afford to ignore the customary judgment that the act of the agent is the act of the principal. We cannot take it for granted that the mere transfer of responsibility to another assures a satisfactory discharge of all the duties which it involves. We do not dare to shut our eyes to the fact as to whether such duties are fulfilled or not, on the ground that the responsibility now rests upon another and not upon ourselves. It is his responsibility, but it is also ours. A person who is at the head of a large business enterprise cannot be omnipresent or omniscient; but he is responsible for the kind of men who are his partners in responsibility, and also for the atmosphere which pervades his business, for the general morale of the service, for the discipline that is enforced, for the prevailing policy and method pursued, and for the spirit and tone which characterize all

departments, however various they may be. Division of labor is not a dissipation of responsibility. He who is responsible for a particular task is relieved of that responsibility only when there is evidence that the given work has been done. The head of a corporation should devise certain methods by which such evidence can be regularly forthcoming, so that when any cog in any wheel may chance to slip, the fact may be at once apparent at the central seat of responsibility.

There is, of course, such a thing as a serial responsibility, as I would style it, that is, where a number of persons in turn assume the responsibility for a certain task, each contributing his share to its accomplishment, and then pass on the full responsibility to some other. This is illustrated in the sending of a registered package. Each one in the series does his part in the process of forwarding it, and receives a signed acknowledgment that another has relieved him of his particular duty and of all responsibility connected with it. The ordinary business of life, however, cannot always be so nicely adjusted. Responsibility appears more often in an indefinite and diffused form, in which many persons are involved, and no one at any time carries the full burden alone. There is no way of escaping responsibility of this kind as long as we remain within the area of its pervading power. We dare not hang about the outer edge of this region, hoping to reap the possible rewards, and yet think to evade all blame or loss in the event of untoward results. There are many who thus endeavor to hold their course along some such imaginary line, so that they may shrewdly keep within it to share the honor or dividends which may accrue, and yet be able to swerve to the other side of it whenever the area within may become the storm center of indignant protest and recrimination.

There is another fallacy which many fall into of securing freedom from responsibility by the assumption of a convenient ignorance. A candidate, for instance, may not choose to know the detail of method and of policy pursued by a campaign

committee in charge of his interests. The members of the committee in turn deem it wise to have him kept in ignorance. It is generally understood that, whatever happens, he is to know nothing about it. The comforting theory is that no responsibility can attach to a person concerning an act of which he is ignorant. This is doubtless true, provided he is not purposely ignorant. A person may not be held responsible for failure to see some obvious circumstance when his eyes are shut; but he is responsible for his eyes being shut when they ought to be open.

There are men who know that certain results could not possibly be accomplished without certain definite means being used; and yet consent weakly to profit by these results on the ground that they do not know explicitly the character of the means used to attain them. It is a lame excuse. We are responsible not only for that which we see and hear, but also for that which may be implied in the things seen and heard, and which we are compelled to recognize as the necessary consequence of them. It is not merely the actual situation in which we find ourselves, but also the logic of such situation that must be interpreted and judged by us as to the measure of our responsibility for them. It must be remembered that the very ground of our responsibility is the presupposition that we are in complete possession of our reason. How absurd, therefore, to narrow the range of responsibility by excluding the obvious inferences which the reason of any man of ordinary intelligence must surely recognize. If a campaign committee, for instance, expends large sums of money, it stands to reason that the one in whose interests it has been raised must know that revenues are not created by magic. Merely to choose not to know is to ignore a definite responsibility and thereby assume an indefinite one. It is like signing a blank check to an unknown order for an unknown amount. The man who would rather not know what his friends are doing in his behalf should be held to strict account for his voluntary ignorance. No one can afford to have things

done for him which he would scorn to do or be afraid to do himself.

There is also a very common feeling that anyone can repudiate all responsibility in a given situation, if he will only declare forcibly and loudly enough that he does not regard himself as in the least responsible for the same. He may insist that he will wash his hands of the whole matter; but there are certain stains that cannot be thus removed. The hands may be washed; but they may not be made clean by the process. How often do men justify themselves, when feebly yielding to the prevailing opinion of the many associated with them in some position of trust, by the ready excuse that after all the majority must rule. It is true that the majority must rule; but it is equally true that the minority must often fight. A mere verbal protest followed by a quiet acquiescence is not sufficient when honor or honesty is the issue. An uncompromising attitude of opposition may have to be maintained until the court of last appeal is reached; that court may be a board of directors, or the stockholders, or public opinion, or in the regular course of legal procedure—even the Supreme Court of the United States itself. Responsibility often means a fight to the finish.

We are responsible for our silence, for our inertia, for our ignorance, for our indifference—in short, for all those negative qualities which commonly constitute the “dummy” directors, those inconsequent personages who would enjoy the honor and the perquisites of their office without allowing themselves to be unduly burdened with its duties and cares. The president of a corporation or a superintendent does not assume the responsibility vested in its board of directors; he merely represents that responsibility. And when they would implicitly assign all sense of their personal obligations to his keeping, they not only put themselves in a position to be easily fooled, but actually offer a ready temptation to such an one to fool them. They are thus doubly reprehensible: for the neglect of duty on the one hand and on the other for actually extending a virtual

invitation for some one to use them as tools for unlawful ends. Not only the wreck of a business, but the wreck of a human being must be laid at their door who by a splendid capacity for negligence do thus expose another to the play of the most subtle temptations which can be conceived.

There is also the mistaken notion that we may escape certain responsibilities by simply not assuming them. There are some obligations, however, which we do not dare to refuse, and which indeed it is not possible to refuse. We have no choice in the matter. We cannot say in truth that we have no responsibility, for instance, for the general decency and good order of the community in which we live, merely because we have chosen to keep out of the village politics, and therefore, not being on the borough council or the board of health, it is none of our business if the laws of nature, of man, or of God are violated. It must be remembered that responsibilities of such a kind are not assumed by definite choice, but belong to us whether we will or not. Certain responsibilities we do not choose; they rather choose us. If at times they seem to us vague and indefinite, it becomes our duty then to make them definite through some effort on our part. We are held to account not merely for doing the obvious duty that circumstance may urge upon us, but also for creating the circumstance which may give rise to a wholly new set of duties. We are not only responsible for lending our service to the cause which has a rightful claim upon us, but also we may be responsible for the establishing of a cause to serve.

There are those who imagine that in certain relations of life there can be devised some natural substitute for the sense of responsibility. It is possible, of course, to establish a set of automatic checks upon an employee's activities, of such a nature as to reduce his personal responsibility to a minimum. Any failure in the performance of his duties is at once mechanically discovered by the various systems of time clocks, bell punches, cash registers, and the like. This is very well in all cases where

the labor is that of simple routine. Mechanical activity can be checked by a mechanical device. Not so, however, as regards those duties which demand a higher order of capacity — such as that of sound judgment, a fine sense of discrimination, and the power of resourceful initiative. In all such matters there can be no substitute for the responsible personality. Man is a responsible being because of this very element of free activity in his nature which no mechanical contrivance, however ingenious, can ever gauge. We are all so dependent upon the integrity, fidelity, and efficiency of man in the more complex relations of life that we must at times, and often the most critical, trust in him implicitly. We do not proceed far in any undertaking without being aware that we are holding another responsible, or that some one is holding us responsible for those inevitable duties which arise out of the relations of man to man the world over. If a man would escape all responsibility he must place himself wholly outside of the relations of life; for life is responsibility. As we have seen, responsibility remains with us even though we may ask others to assume it; we share it with others, but our portion is the same; when we turn our backs upon it, we find it still facing us; we flee from it, and, however far it may be, we see it waiting for us at the journey's end.

SELF-RELIANCE ¹

RALPH WALDO EMERSON

I READ the other day some verses written by an eminent painter which were original and not conventional. Always the soul hears an admonition in such lines, let the subject be what it may. The sentiment they instill is of more value than any thought they may contain. To believe your own thought, to believe that what is true for you in your private heart is true for all men, — that is genius. Speak your latent conviction, and it shall be the universal sense; for always the inmost becomes the outmost — and our first thought is rendered back to us by the trumpets of the Last Judgment. Familiar as the voice of the mind is to each, the highest merit we ascribe to Moses, Plato, and Milton is that they set at naught books and traditions, and spoke not what men did, but what they thought. A man should learn to detect and watch that gleam of light which flashes across his mind from within, more than the luster of the firmament of bards and sages. Yet he dismisses without notice his thought, because it is his. In every work of genius we recognize our own rejected thoughts; they come back to us with a certain alienated majesty. Great works of art have no more affecting lesson for us than this. They teach us to abide by our spontaneous impression with good-humored inflexibility then most when the whole cry of voices is on the other side. Else to-morrow a stranger will say with masterly good sense precisely what we have thought and felt all the time, and we shall be forced to take with shame our own opinion from another.

¹ From *Essays*, First Series, 1841; the second half of the essay is here omitted.

There is a time in every man's education when he arrives at the conviction that envy is ignorance; that imitation is suicide; that he must take himself for better for worse as his portion; that though the wide universe is full of good, no kernel of nourishing corn can come to him but through his toil bestowed on that plot of ground which is given to him to till. The power which resides in him is new in nature, and none but he knows what that is which he can do, nor does he know until he has tried. Not for nothing one face, one character, one fact, makes much impression on him, and another none. It is not without preëstablished harmony, this sculpture in the memory. The eye was placed where one ray should fall, that it might testify of that particular ray. Bravely let him speak the utmost syllable of his confession. We but half express ourselves, and are ashamed of that divine idea which each of us represents. It may be safely trusted as proportionate and of good issues, so it be faithfully imparted, but God will not have his work made manifest by cowards. It needs a divine man to exhibit anything divine. A man is relieved and gay when he has put his heart into his work and done his best; but what he has said or done otherwise shall give him no peace. It is a deliverance which does not deliver. In the attempt his genius deserts him; no muse befriends; no invention, no hope.

Trust thyself: every heart vibrates to that iron string. Accept the place the divine providence has found for you, the society of your contemporaries, the connection of events. Great men have always done so, and confided themselves childlike to the genius of their age, betraying their perception that the Eternal was stirring at their heart, working through their hands, predominating in all their being. And we are now men, and must accept in the highest mind the same transcendent destiny; and not pinched in a corner, not cowards fleeing before a revolution, but redeemers and benefactors, pious aspirants to be noble clay under the Almighty effort, let us advance on Chaos and the Dark.

What pretty oracles nature yields us on this text in the face and behavior of children, babes, and even brutes. That divided and rebel mind, that distrust of a sentiment because our arithmetic has computed the strength and means opposed to our purpose, these have not. Their mind being whole, their eye is as yet unconquered, and when we look in their faces, we are disconcerted. Infancy conforms to nobody; all conform to it; so that one babe commonly makes four or five out of the adults who prattle and play to it. So God has armed youth and puberty and manhood no less with its own piquancy and charm, and made it enviable and gracious and its claims not to be put by, if it will stand by itself. Do not think the youth has no force, because he cannot speak to you and me. Hark! in the next room who spoke so clear and emphatic? Good Heaven! it is he! it is that very lump of bashfulness and phlegm which for weeks has done nothing but eat when you were by, and now rolls out these words like bell-strokes. It seems he knows how to speak to his contemporaries. Bashful or bold, then, he will know how to make us seniors very unnecessary.

The nonchalance of boys who are sure of a dinner, and would disdain as much as a lord to do or say aught to conciliate one, is the healthy attitude of human nature. How is a boy the master of society!—independent, irresponsible, looking out from his corner on such people and facts as pass by, he tries and sentences them on their merits, in the swift, summary way of boys, as good, bad, interesting, silly, eloquent, troublesome. He cumbers himself never about consequences, about interests; he gives an independent, genuine verdict. You must court him; he does not court you. But the man is as it were clapped into jail by his consciousness. As soon as he has once acted or spoken with *éclat* he is a committed person, watched by the sympathy or the hatred of hundreds, whose affections must now enter into his account. There is no Lethe for this. Ah, that he could pass again into his neutral, godlike independence! Who can thus lose all pledge and, having observed, observe

again from the same unaffected, unbiased, unbribable, unfrighted innocence, must always be formidable, must always engage the poet's and the man's regards. Of such an immortal youth the force would be felt. He would utter opinions on all passing affairs, which being seen to be not private but necessary, would sink like darts into the ear of men and put them in fear.

These are the voices which we hear in solitude, but they grow faint and inaudible as we enter into the world. Society everywhere is in conspiracy against the manhood of every one of its members. Society is a joint-stock company, in which the members agree, for the better securing of his bread to each shareholder, to surrender the liberty and culture of the eater. The virtue in most requests is conformity. Self-reliance is its aversion. It loves not realities and creators, but names and customs.

Whoso would be a man must be a nonconformist. He who would gather immortal palms must not be hindered by the name of goodness, but must explore if it be goodness. Nothing is at last sacred but the integrity of our own mind. Absolve you to yourself, and you shall have the suffrage of the world. I remember an answer which when quite young I was prompted to make to a valued adviser who was wont to importune me with the dear old doctrines of the church. On my saying, "What have I to do with the sacredness of traditions, if I live wholly from within?" my friend suggested, — "But these impulses may be from below, not from above." I replied, "They do not seem to me to be such; but if I am the devil's child, I will live then from the devil." No law can be sacred to me but that of my nature. Good and bad are but names very readily transferable to that or this; the only right is what is after my constitution; the only wrong, what is against it. A man is to carry himself in the presence of all opposition as if everything were titular and ephemeral but he. I am ashamed to think how easily we capitulate to badges and names, to large societies and dead institutions. Every decent and well-spoken

individual affects and sways me more than is right. I ought to go upright and vital, and speak the rude truth in all ways. If malice and vanity wear the coat of philanthropy, shall that pass? If an angry bigot assumes this bountiful cause of Abolition, and comes to me with his last news from Barbadoes, why should I not say to him, "Go love thy infant; love thy wood-chopper; be good-natured and modest; have that grace; and never varnish your hard, uncharitable ambition with this incredible tenderness for black folk a thousand miles off. Thy love afar is spite at home." Rough and graceless would be such greeting, but truth is handsomer than the affectation of love. Your goodness must have some edge to it, — else it is none. The doctrine of hatred must be preached, as the counter-action of the doctrine of love, when that pules and whines. I shun father and mother and wife and brother when my genius calls me. I would write on the lintels of the door-post, *Whim*. I hope it is somewhat better than whim at last, but we cannot spend the day in explanation. Expect me not to show cause why I seek or why I exclude company. Then, again, do not tell me, as a good man did to-day, of my obligation to put all poor men in good situations. Are they *my* poor? I tell thee, thou foolish philanthropist, that I grudge the dollar, the dime, the cent I give to such men as do not belong to me and to whom I do not belong. There is a class of persons to whom by all spiritual affinity I am bought and sold; for them I will go to prison if need be; but your miscellaneous popular charities; the education at college of fools; the building of meeting-houses to the vain end to which many now stand; alms to sots, and the thousandfold Relief Societies; — though I confess with shame I sometimes succumb and give the dollar, it is a wicked dollar, which by and by I shall have the manhood to withhold.

Virtues are, in the popular estimate, rather the exception than the rule. There is the man *and* his virtues. Men do what is called a good action, as some piece of courage or charity,

much as they would pay a fine in expiation of daily non-appearance on parade. Their works are done as an apology or extenuation of their living in the world, — as invalids and the insane pay a high board. Their virtues are penances. I do not wish to expiate, but to live. My life is not an apology, but a life. It is for itself and not for a spectacle. I much prefer that it should be of a lower strain, so it be genuine and equal, than that it should be glittering and unsteady. I wish it to be sound and sweet, and not to need diet and bleeding. My life should be unique; it should be an alms, a battle, a conquest, a medicine. I ask primary evidence that you are a man, and refuse this appeal from the man to his actions. I know that for myself it makes no difference whether I do or forbear those actions which are reckoned excellent. I cannot consent to pay for a privilege where I have intrinsic right. Few and mean as my gifts may be, I actually am, and do not need for my own assurance or the assurance of my fellows any secondary testimony.

What I must do is all that concerns me, not what the people think. This rule, equally arduous in actual and in intellectual life, may serve for the whole distinction between greatness and meanness. It is the harder because you will always find those who think they know what is your duty better than you know it. It is easy in the world to live after the world's opinion; it is easy in solitude to live after our own; but the great man is he who in the midst of the crowd keeps with perfect sweetness the independence of solitude.

The objection to conforming to usages that have become dead to you is that it scatters your force. It loses your time and blurs the impression of your character. If you maintain a dead church, contribute to a dead Bible Society, vote with a great party either for the Government or against it, spread your table like base housekeepers, — under all these screens I have difficulty to detect the precise man you are. And of course so much force is withdrawn from your proper life. But

do your thing, and I shall know you. Do your work, and you shall reinforce yourself. A man must consider what a blindman's-buff is this game of conformity. If I know your sect I anticipate your argument. I hear a preacher announce for his text and topic the expediency of one of the institutions of his church. Do I not know beforehand that not possibly can he say a new and spontaneous word? Do I not know that with all this ostentation of examining the grounds of the institution he will do no such thing? Do I not know that he is pledged to himself not to look but at one side, the permitted side, not as a man, but as a parish minister? He is a retained attorney, and these airs of the bench are the emptiest affectation. Well, most men have bound their eyes with one or another handkerchief, and attached themselves to some one of these communities of opinion. This conformity makes them not false in a few particulars, authors of a few lies, but false in all particulars. Their every truth is not quite true. Their two is not the real two, their four not the real four: so that every word they say chagrins us and we know not where to begin to set them right. Meantime nature is not slow to equip us in the prison-uniform of the party to which we adhere. We come to wear one cut of face and figure, and acquire by degrees the gentlest asinine expression. There is a mortifying experience in particular, which does not fail to wreak itself also in the general history; I mean "the foolish face of praise," the forced smile which we put on in company where we do not feel at ease, in answer to conversation which does not interest us. The muscles, not spontaneously moved but moved by a low usurping willfulness, grow tight about the outline of the face, and make the most disagreeable sensation — a sensation of rebuke and warning which no brave young man will suffer twice.

For nonconformity the world whips you with its displeasure. And therefore a man must know how to estimate a sour face. The bystanders look askance on him in the public street or in

the friend's parlor. If this aversion had its origin in contempt and resistance like his own he might well go home with a sad countenance; but the sour faces of the multitude, like their sweet faces, have no deep cause, — disguise no god, but are put on and off as the wind blows and a newspaper directs. Yet is the discontent of the multitude more formidable than that of the senate and the college. It is easy enough for a firm man who knows the world to brook the rage of the cultivated classes. Their rage is decorous and prudent, for they are timid, as being very vulnerable themselves. But when to their feminine rage the indignation of the people is added, when the ignorant and the poor are aroused, when the unintelligent brute force that lies at the bottom of society is made to growl and mow, it needs the habit of magnanimity and religion to treat it godlike as a trifle of no concernment.

The other terror that scares us from self-trust is our consistency; a reverence for our past act or word because the eyes of others have no other data for computing our orbit than our past acts, and we are loath to disappoint them.

But why should you keep your head over your shoulder? Why drag about this monstrous corpse of your memory, lest you contradict somewhat you have stated in this or that public place? Suppose you should contradict yourself; what then? It seems to be a rule of wisdom never to rely on your memory alone, scarcely even in acts of pure memory, but to bring the past for judgment into the thousand-eyed present, and live ever in a new day. Trust your emotion. In your metaphysics you have denied personality to the Deity, yet when the devout motions of the soul come, yield to them heart and life, though they should clothe God with shape and color. Leave your theory, as Joseph his coat in the hand of the harlot, and flee.

A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines. With consistency a great soul has simply nothing to do. He may as well concern himself with his shadow on the wall. Out upon

your guarded lips! Sew them up with packthread, do. Else if you would be a man speak what you think to-day in words as hard as cannon balls, and to-morrow speak what to-morrow thinks in hard words again, though it contradict everything you said to-day. Ah, then, exclaim the aged ladies, you shall be sure to be misunderstood! Misunderstood! It is a right fool's word. Is it so bad then to be misunderstood? Pythagoras was misunderstood, and Socrates, and Jesus, and Luther, and Copernicus, and Galileo, and Newton, and every pure and wise spirit that ever took flesh. To be great is to be misunderstood.

I suppose no man can violate his nature. All the sallies of his will are rounded in by the law of his being, as the inequalities of Andes and Himmaleh are insignificant in the curve of the sphere. Nor does it matter how you gauge and try him. A character is like an acrostic or Alexandrian stanza; — read it forward, backward, or across, it still spells the same thing. In this pleasing, contrite wood-life which God allows me, let me record day by day my honest thought without prospect or retrospect, and, I cannot doubt, it will be found symmetrical, though I mean it not and see it not. My book should smell of pines and resound with the hum of insects. The swallow over my window should interweave that thread or straw he carries in his bill into my web also. We pass for what we are. Character teaches above our wills. Men imagine that they communicate their virtue or vice only by overt actions, and do not see that virtue or vice emit a breath every moment.

Fear never but you shall be consistent in whatever variety of actions, so they be each honest and natural in their hour. For of one will, the actions will be harmonious, however unlike they seem. These varieties are lost sight of when seen at a little distance, at a little height of thought. One tendency unites them all. The voyage of the best ship is a zigzag line of a hundred tacks. This is only microscopic criticism. See

the line from a sufficient distance, and it straightens itself to the average tendency. Your genuine action will explain itself and will explain your other genuine actions. Your conformity explains nothing. Act singly, and what you have already done singly will justify you now. Greatness always appeals to the future. If I can be great enough now to do right and scorn eyes, I must have done so much right before as to defend me now. Be it how it will, do right now. Always scorn appearances and you always may. The force of character is cumulative. All the foregone days of virtue work their health into this. What makes the majesty of the heroes of the senate and the field, which so fills the imagination? The consciousness of a train of great days and victories behind. There they all stand and shed an united light on the advancing actor. He is attended as by a visible escort of angels to every man's eye. That is it which throws thunder into Chatham's voice, and dignity into Washington's port, and America into Adams's eye. Honor is venerable to us because it is no ephemeris. It is always ancient virtue. We worship it to-day because it is not of to-day. We love it and pay it homage because it is not a trap for our love and homage, but is self-dependent, self-derived, and therefore of an old immaculate pedigree, even if shown in a young person.

I hope in these days we have heard the last of conformity and consistency. Let the words be gazetted and ridiculous henceforward. Instead of the gong for dinner, let us hear a whistle from the Spartan fife. Let us bow and apologize never more. A great man is coming to eat at my house. I do not wish to please him; I wish that he should wish to please me. I will stand here for humanity, and though I would make it kind, I would make it true. Let us affront and reprimand the smooth mediocrity and squalid contentment of the times, and hurl in the face of custom and trade and office the fact which is the upshot of all history, that there is a great responsible Thinker and Actor moving wherever moves a man;

that a true man belongs to no other time or place, but is the center of things. Where he is, there is nature. He measures you and all men and all events. You are constrained to accept his standard. Ordinarily, everybody in society reminds us of somewhat else, or of some other person. Character, reality, reminds you of nothing else; it takes place of the whole creation. The man must be so much that he must make all circumstances indifferent — put all means into the shade. This all great men are and do. Every true man is a cause, a country, and an age; requires infinite spaces and numbers and time fully to accomplish his thought; — and posterity seem to follow his steps as a procession. A man Caesar is born, and for ages after we have a Roman Empire. Christ is born, and millions of minds so grow and cleave to his genius that he is confounded with virtue and the possible of man. An institution is the lengthened shadow of one man: as, the Reformation, of Luther; Quakerism, of Fox; Methodism, of Wesley; Abolition, of Clarkson. Scipio, Milton called “the height of Rome”; and all history resolves itself very easily into the biography of a few stout and earnest persons.

Let a man then know his worth, and keep things under his feet. Let him not peep or steal, or skulk up and down with the air of a charity-boy, a bastard, or an interloper in the world which exists for him. But the man in the street, finding no worth in himself which corresponds to the force which built a tower or sculptured a marble god, feels poor when he looks on these. To him a palace, a statue, or a costly book has an alien and forbidding air, much like a gay equipage, and seems to say like that, “Who are you, sir?” Yet they all are his, suitors for his notice, petitioners to his faculties that they will come out and take possession. The picture waits for my verdict; it is not to command me, but I am to settle its claim to praise. That popular fable of the sot who was picked up dead drunk in the street, carried to the duke’s house, washed and dressed and laid in the duke’s bed, and, on his waking, treated with all

obsequious ceremony like the duke, and assured that he had been insane — owes its popularity to the fact that it symbolizes so well the state of man, who is in the world a sort of sot, but now and then wakes up, exercises his reason, and finds himself a true prince.

Our reading is mendicant and sycophantic. In history our imagination makes fools of us, plays us false. Kingdom and lordship, power and estate, are a gaudier vocabulary than private John and Edward in a small house and common day's work; but the things of life are the same to both: the sum total of both is the same. Why all this deference to Alfred and Scanderbeg and Gustavus? Suppose they were virtuous; did they wear out virtue? As great a stake depends on your private act to-day as followed their public and renowned steps. When private men shall act with original views, the luster will be transferred from the actions of kings to those of gentlemen.

The world has indeed been instructed by its kings, who have so magnetized the eyes of nations. It has been taught by this colossal symbol the mutual reverence that is due from man to man. The joyful loyalty with which men have everywhere suffered the king, the noble, or the great proprietor to walk among them by a law of his own, make his own scale of men and things and reverse theirs, pay for benefits not with money but with honor, and represent the Law in his person, was the hieroglyphic by which they obscurely signified their consciousness of their own right and comeliness, the right of every man.

The magnetism which all original action exerts is explained when we inquire the reason of self-trust. Who is the Trustee? What is the aboriginal Self, on which a universal reliance may be grounded? What is the nature and power of that science-baffling star, without parallax, without calculable elements, which shoots a ray of beauty even into trivial and impure actions, if the least mark of independence appear? The inquiry leads us to that source, at once the essence of genius, the essence

of virtue, and the essence of life, which we call Spontaneity or Instinct. We denote this primary wisdom as Intuition, whilst all later teachings are tuitions. In that deep force, the last fact behind which analysis cannot go, all things find their common origin. For the sense of being which in calm hours rises, we know not how, in the soul, is not diverse from things, from space, from light, from time, from man, but one with them and proceedeth obviously from the same source whence their life and being also proceedeth. We first share the life by which things exist and afterward see them as appearances in nature and forget that we have shared their cause. Here is the fountain of action and the fountain of thought. Here are the lungs of that inspiration which giveth man wisdom, of that inspiration of man which cannot be denied without impiety and atheism. We lie in the lap of immense intelligence, which makes us organs of its activity and receivers of its truth. When we discern justice, when we discern truth, we do nothing of ourselves, but allow a passage to its beams. If we ask whence this comes, if we seek to pry into the soul that causes — all metaphysics, all philosophy is at fault. Its presence or its absence is all we can affirm. Every man discerns between the voluntary acts of his mind and his involuntary perceptions. And to his involuntary perceptions he knows a perfect respect is due. He may err in the expression of them, but he knows that these things are so, like day and night, not to be disputed. All my willful actions and acquisitions are but roving; — the most trivial reverie, the faintest native emotion, are domestic and divine. Thoughtless people contradict as readily the statement of perceptions as of opinions, or rather much more readily; for they do not distinguish between perception and notion. They fancy that I choose to see this or that thing. But perception is not whimsical, but fatal. If I see a trait, my children will see it after me, and in course of time all mankind, — although it may chance that no one has seen it before me. For my perception of it is as much a fact as the sun.

The relations of the soul to the divine spirit are so pure that it is profane to seek to interpose helps. It must be that when God speaketh he should communicate, not one thing, but all things; should fill the world with his voice; should scatter forth light, nature, time, souls, from the center of the present thought; and new date and new create the whole. Whenever a mind is simple and receives a divine wisdom, then old things pass away, — means, teachers, texts, temples fall; it lives now, and absorbs past and future into the present hour. All things are made sacred by relation to it, — one thing as much as another. All things are dissolved to their center by their cause, and in the universal miracle petty and particular miracles disappear. This is and must be. If therefore a man claims to know and speak of God and carries you backward to the phraseology of some old moldered nation in another country, in another world, believe him not. Is the acorn better than the oak which is its fullness and completion? Is the parent better than the child into whom he has cast his ripened being? Whence then this worship of the past? The centuries are conspirators against the sanity and majesty of the soul. Time and space are but physiological colors which the eye maketh, but the soul is light; where it is, is day; where it was, is night; and history is an impertinence and an injury if it be anything more than a cheerful apologue or parable of my being and becoming.

Man is timid and apologetic; he is no longer upright; he dares not say "I think," "I am," but quotes some saint or sage. He is ashamed before the blade of grass or the blowing rose. These roses under my window make no reference to former roses or to better ones; they are for what they are; they exist with God to-day. There is no time to them. There is simply the rose; it is perfect in every moment of its existence. Before a leaf-bud has burst, its whole life acts; in the full-blown flower there is no more; in the leafless root there is no less. Its nature is satisfied and it satisfies nature in all moments alike.

There is no time to it. But man postpones or remembers; he does not live in the present, but with reverted eye laments the past, or, heedless of the riches that surround him, stands on tiptoe to foresee the future. He cannot be happy and strong until he too lives with nature in the present, above time.

This should be plain enough. Yet see what strong intellects dare not yet hear God himself unless he speak the phraseology of I know not what David, or Jeremiah, or Paul. We shall not always set so great a price on a few texts, on a few lives. We are like children who repeat by rote the sentences of grandames and tutors, and, as they grow older, of the men of talents and character they chance to see, — painfully recollecting the exact words they spoke; afterward, when they come into the point of view which those had who uttered these sayings, they understand them and are willing to let the words go; for at any time they can use words as good when occasion comes. So was it with us, so will it be, if we proceed. If we live truly, we shall see truly. It is as easy for the strong man to be strong as it is for the weak to be weak. When we have new perception, we shall gladly disburden the memory of its hoarded treasures as old rubbish. When a man lives with God, his voice shall be as sweet as the murmur of the brook and the rustle of the corn.

And now at last the highest truth on this subject remains unsaid — probably cannot be said; for all that we say is the far-off remembering of the intuition: That thought, by what I can now nearest approach to say it, is this: When good is near you, when you have life in yourself, — it is not by any known or appointed way; you shall not discern the foot-prints of any other; you shall not see the face of man; you shall not hear any name, — the way, the thought, the good, shall be wholly strange and new. It shall exclude all other being. You take the way from man, not to man. All persons that ever existed are its fugitive ministers. There shall be no fear in it. Fear and hope are alike beneath it. It asks nothing. There is

somewhat low even in hope. We are then in vision. There is nothing that can be called gratitude, nor properly joy. The soul is raised over passion. It seeth identity and eternal causation. It is a perceiving that Truth and Right are. Hence it becomes a Tranquillity out of the knowing that all things go well. Vast spaces of nature; the Atlantic Ocean, the South Sea; vast intervals of time, years, centuries, are of no account. This which I think and feel underlay that former state of life and circumstances, as it does underlie my present and will always all circumstances, and what is called life and what is called death.

AMERICA'S LOVE OF PEACE¹

JOHN HAY

I ESTEEM it a great honor and privilege to be allowed to extend to you the welcome of the Government and the people of the United States of America on this memorable and auspicious occasion. No time could be more fitting for this gathering of a parliament of peace than to-day, when at the other end of the world the thunder of a destructive and sanguinary war is deafening the nations, while here we are preparing to settle the question of a vast transfer of power by an appeal to reason and orderly procedure, under the sanction of a law implicitly accepted by eighty millions of people.

And as if heaven had decided to give a sign of deepest significance to the hour of your meeting, it coincides with the commitment to eternal peace of all that was mortal of our dear and honored co-laborer in this sacred cause. George Frisbie Hoar had many titles to glory and honor. Not the least of them was the firm and constant courage with which, through all his illustrious life, he pleaded for humanity and universal good will.

No place could be more suitable than this high-hearted city, which has been for nearly three hundred years the birthplace and the home of every idea of progress and enlightenment which has germinated in the Western World. To bid you welcome to the home of Vane, of Winthrop, and of Adams, of Channing and Emerson, is to give you the freedom of no mean city, to make you partakers of a spiritual inheritance without which, with all

¹ Copyright. Reprinted from *Addresses of John Hay* by permission of the Century Company. This address was delivered at the thirteenth International Congress of Peace, Boston, October 3, 1904.

our opulence, we should be poor indeed. It is true that this great Commonwealth has sought, with the sword, peace under liberty. We confess that many wars have left their traces in the pages of its history and its literature; art has adorned the public places of this stately town with the statues of its heroic sons. But the dominant note of its highest culture, its most persistent spirit, has been that righteousness which exalteth a nation, that obedience to the inner light which leads along the paths of peace.

And the policy of the nation at large, which owes so much of its civic spirit to the founders of New England, has been in the main a policy of peace. During the hundred and twenty years of our independent existence we have had but three wars with the outside world, though we have had a most grievous and dolorous struggle with our own people. We have had, I think, a greater relative immunity from war than any of our neighbors. All our greatest men have been earnest advocates of peace. The very men who founded our liberties with the mailed hand detested and abhorred war as the most futile and ferocious of human follies. Franklin and Jefferson repeatedly denounced it — the one with all the energy of his rhetoric, the other with the lambent fire of his wit. But not our philosophers alone — our fighting men have seen at close quarters how hideous is the face of war. Washington said, "My first wish is to see this plague to mankind banished from the earth"; and again he said, "We have experienced enough of its evils in this country to know that it should not be wantonly or unnecessarily entered upon." There is no discordant note in the utterances of our most eminent soldiers on this subject. The most famous utterance of General Grant — the one which will linger longest in the memories of men — was the prayer of his war-weary heart, "Let us have peace." Sherman reached the acme of his marvelous gift of epigram when he said, "War is hell." And Abraham Lincoln, after the four terrible years in which he had directed our vast armies and navies, uttered on the threshold of eternity the

fervent and touching aspiration that "the mighty scourge of war might speedily pass away."

There has been no solution of continuity in the sentiments of our Presidents on this subject up to this day. McKinley deplored with every pulse of his honest and kindly heart the advent of the war which he had hoped might not come in his day, and gladly hailed the earliest moment for making peace; and President Roosevelt has the same tireless energy in the work of concord that he displayed when he sought peace and ensured it on the field of battle. No Presidents in our history have been so faithful and so efficient as the last two in the cause of arbitration and of every peaceful settlement of differences. I mention them together because their work has been harmonious and consistent. We hailed with joy the generous initiative of the Russian Emperor, and sent to the conference at the Hague the best men we had in our civic and military life. When The Hague Court lay apparently wrecked at the beginning of its voyage, threatened with death before it had fairly begun to live, it was the American Government which gave it the breath of life by inviting the Republic of Mexico to share our appeal to its jurisdiction; and the second case brought before it was at the instance of Mr. Roosevelt, who declined in its favor the high honor of arbitrating an affair of world-wide importance.

I beg you to believe, it is not by way of boasting that I recall these incidents to your minds; it is rather as a profession of faith in a cause which the present Administration has deeply at heart that I ask you to remember, in the deliberations upon which you are entering, the course to which the American Government is pledged and which it has steadily pursued for the last seven years. It is true that in those years we have had a hundred days of war — but they put an end forever to bloodshed which had lasted a generation. We landed a few platoons of marines on the Isthmus last year; but that act closed without a shot a sanguinary succession of trivial wars. We marched a little army to Peking; but it was to save not only the beleaguered

legations, but a great imperiled civilization. By mingled gentleness and energy, to which most of the world beyond our borders has done justice, we have given to the Philippines, if not peace, at least a nearer approach to it than they have had within the memory of men.

If our example is worth anything to the world, we have given it in the vital matter of disarmament. We have brought away from the Far East 55,000 soldiers whose work was done, and have sent them back to the fields of peaceful activity. We have reduced our Army to its minimum of 60,000 men; in fact, we may say we have no army, but in place of one a nucleus for drill and discipline. We have three-fourths of one soldier for every thousand of the population — a proportion which if adopted by others power would at once eliminate wars and rumors of wars from the daily thoughts of the chancelleries of the world.

But, fixed as our tradition is, clear as is our purpose in the direction of peace, no country is permanently immune to war so long as the desire and the practice of peace are not universal. If we quote Washington as an advocate of peace, it is but fair also to quote him where he says: "To be prepared for war is one of the most effectual means of preserving peace." And at another time he said: "To an active external commerce the protection of a naval force is indispensable. To secure respect to a neutral flag requires a naval force organized and ready to vindicate it from insult or aggression." To acknowledge the existence of an evil is not to support or approve it: but the facts must be faced. Human history is one long, desolate story of bloodshed. All the arts unite in the apparent conspiracy to give precedence to the glory of arms. Demosthenes and Pericles adjured the Athenians by the memory of their battles. Horace boasted that he had been a soldier, *non sine gloria*. Even Milton, in that sublime sonnet where he said, "Peace hath her victories no less renowned than war," mentioned among the godly trophies of Cromwell "Darwen stream with blood of Scots imbrued." In almost every sermon and hymn we hear in our churches, the

imagery of war and battle is used. We are charged to fight the good fight of faith; we are to sail through bloody seas to win the prize. The Christian soldier is constantly marshaled to war. Not only in our habits and customs, but in our daily speech and in our inmost thoughts we are beset by the obsession of conflict and mutual destruction. It is like the law of sin in the members to which the greatest of the Apostles refers: "Who shall deliver us from the body of this death?"

I am speaking to those who recognize the lamentable state of things and who yet do not accept it, or submit to it, and who hope that through the shadow of this night we shall sweep into a younger day. How is this great deliverance to be accomplished?

We have all recently read that wonderful sermon on war by Count Tolstoi, in which a spirit of marvelous lucidity and fire, absolutely detached from geographical or political conditions, speaks the Word as it has been given to speak it, and as no other living man could have done. As you read, with an aching heart, his terrible arraignment of war, feeling that as a man you are partly responsible for all human atrocities, you wait with impatience for the remedy he shall propose, and you find it is — Religion. Yes, that is the remedy. If all would do right, nobody would do wrong — nothing is plainer. It is a counsel of perfection, satisfactory to prophets and saints, to be reached in God's good time. But you are here to consult together to see whether the generation now alive may not do something to hasten the coming of the acceptable day, the appearance on earth of the beatific vision. If we cannot at once make peace and good will the universal rule and practice of nations, what can we do to approximate this condition? What measures can we now take which may lead us at least a little distance toward the wished-for goal?

I have not come to advise you; I have no such ambitious pretensions. I do not even aspire to take part in your deliberations. But I am authorized to assure you that the American Government extends to you a cordial and sympathetic welcome,

and shares to the utmost the spirit and purpose in which you have met. The President, so long as he remains in power, has no thought of departing from the traditions bequeathed us by the great soldiers and statesmen of our early history, which have been strictly followed during the last seven years. We shall continue to advocate and to carry into effect, as far as practicable, the principle of the arbitration of such questions as may not be settled through diplomatic negotiations. We have already done much in this direction; we shall hope to do much more. The President is now considering the negotiation of treaties of arbitration with such of the European powers as desire them, and hopes to lay them before the Senate next winter. And, finally, the President has only a few days ago promised, in response to the request of the Inter-parliamentary Union, to invite the nations to a second conference at The Hague to continue the beneficent work of the Conference of 1899.

Unhappily we cannot foresee in the immediate future the cessation of wars upon the earth. We ought therefore to labor constantly for the mitigation of the horrors of war, especially to do what we can to lessen the sufferings of those who have no part in the struggle. This has been one of the most warmly cherished wishes of the last two Administrations. I make no apology for reading you a paragraph from the message which President Roosevelt sent to Congress last December.

There seems good ground for the belief that there has been a real growth among the civilized nations of a sentiment which will permit a gradual substitution of other methods than the method of war in the settlement of disputes. It is not pretended that as yet we are near a position in which it will be possible wholly to prevent war, or that a just regard for national interest and honor will in all cases permit of the settlement of international disputes by arbitration; but by a mixture of prudence and firmness with wisdom we think it is possible to do away with much of the provocation and excuse for war, and at least in many cases to substitute some other and more rational method for the settlement of disputes. The Hague Court offers so good an example of what can be done

in the direction of such settlement that it should be encouraged in every way.

Further steps should be taken. In President McKinley's annual message of December 5, 1898, he made the following recommendation:

The experiences of the last year bring forcibly home to us a sense of the burdens and the waste of war. We desire, in common with most civilized nations, to reduce to the lowest possible point the damage sustained in time of war by peaceable trade and commerce. It is true we may suffer in such cases less than other communities, but all nations are damaged more or less by the state of uneasiness and apprehension into which an outbreak of hostilities throws the entire commercial world. It should be our object, therefore, to minimize, so far as practicable, this inevitable loss and disturbance. This purpose can probably best be accomplished by an international agreement to regard all private property at sea as exempt from capture or destruction by the forces of belligerent powers. The United States Government has for many years advocated this humane and beneficent principle, and is now in a position to recommend it to other powers without the imputation of selfish motives. I therefore suggest for your consideration that the Executive be authorized to correspond with the governments of the principal maritime powers with a view of incorporating into the permanent law of civilized nations the principle of the exemption of all private property at sea, not contraband of war, from capture or destruction by belligerent powers.

The President urged this beneficent scheme with an earnestness which gained the willing attention of Congress, already predisposed to it in spirit, and on the 28th of April of this year he was able to approve a joint resolution of both Houses recommending that the "President endeavor to bring about an understanding among the principal maritime powers with a view to incorporating into the permanent law of civilized nations the principle of the exemption of all private property at sea, not contraband of war, from capture or destruction by belligerents."

It has not been thought advisable by the President during the past summer to call the attention of the powers to a project which would necessarily be regarded by two of them, and possibly by others, with reference to its bearing upon the deplorable

conflict now raging in the Far East. But as we earnestly pray that the return of peace may not be long delayed between the two nations, to both of which we are bound by so many historic ties, we may confidently look forward at no distant day to inviting the attention of the nations to this matter, and we hope we may have the powerful influence of this great organization in gaining their adherence.

The time allotted to me is at an end. I can only bid you God-speed in your work. The task you have set yourselves, the purpose to which you are devoted, have won the praise of earth and the blessing of Heaven since the morning of time. The noblest of all the beatitudes is the consecration promised the peacemakers. Even if in our time we may not win the wreath of olive; even if we may not hear the golden clamor of the trumpets celebrating the reign of universal and enduring peace, it is something to have desired it, to have worked for it in the measure of our forces. And if you now reap no visible guerdon of your labors, the peace of God that passes understanding will be your all-sufficient reward.

WAR FOR DEMOCRACY AND PEACE¹

WOODROW WILSON

Gentlemen of the Congress: I have called the Congress into extraordinary session because there are serious, very serious, choices of policy to be made, and made immediately, which it was neither right nor constitutionally permissible that I should assume the responsibility of making.

On the 3d of February last I officially laid before you the extraordinary announcement of the Imperial German Government that on and after the first day of February it was its purpose to put aside all restraints of law or of humanity and use its submarines to sink every vessel that sought to approach either the ports of Great Britain and Ireland or the western coasts of Europe, or any of the ports controlled by the enemies of Germany within the Mediterranean. That had seemed to be the object of the German submarine warfare earlier in the war, but since April of last year the Imperial Government had somewhat restrained the commanders of its undersea craft, in conformity with its promise, then given to us, that passenger boats should not be sunk and that due warning would be given to all other vessels which its submarines might seek to destroy, when no resistance was offered or escape attempted, and care taken that their crews were given at least a fair chance to save their lives in their open boats. The precautions taken were meager and haphazard enough, as was proved in distressing instance after instance in the progress of the cruel and unmanly business, but a certain degree of restraint was observed.

¹ The War Message was read by the President before a joint session of the Senate and the House of Representatives, April 2, 1917.

The new policy has swept every restriction aside. Vessels of every kind, whatever their flag, their character, their cargo, their destination, their errand, have been ruthlessly sent to the bottom without warning and without thought of help or mercy for those on board, the vessels of friendly neutrals along with those of belligerents. Even hospital ships and ships carrying relief to the sorely bereaved and stricken people of Belgium, though the latter were provided with safe conduct through the proscribed areas by the German Government itself and were distinguished by unmistakable marks of identity, have been sunk with the same reckless lack of compassion or of principle.

I was for a little while unable to believe that such things would in fact be done by any Government that had hitherto subscribed to humane practices of civilized nations. International law had its origin in the attempt to set up some law which would be respected and observed upon the seas, where no nation has right of dominion and where lay the free highways of the world. By painful stage after stage has that law been built up, with meager enough results, indeed, after all was accomplished that could be accomplished, but always with a clear view, at least, of what the heart and conscience of mankind demanded.

This minimum of right the German Government has swept aside, under the plea of retaliation and necessity and because it had no weapons which it could use at sea except these, which it is impossible to employ, as it is employing them, without throwing to the wind all scruples of humanity or of respect for the understandings that were supposed to underlie the intercourse of the world.

I am not now thinking of the loss of property involved, immense and serious as that is, but only of the wanton and wholesale destruction of the lives of noncombatants, men, women, and children, engaged in pursuits which have always, even in the darkest periods of modern history, been deemed innocent and legitimate. Property can be paid for; the lives of peaceful and innocent people cannot be.

The present German submarine warfare against commerce is a warfare against mankind. It is a war against all nations. American ships have been sunk, American lives taken, in ways which it has stirred us very deeply to learn of, but the ships and people of other neutral and friendly nations have been sunk and overwhelmed in the waters in the same way. There has been no discrimination. The challenge is to all mankind. Each nation must decide for itself how it will meet it. The choice we make for ourselves must be made with a moderation of counsel and a temperateness of judgment befitting our character and our motives as a nation. We must put excited feeling away. Our motive will not be revenge of the victorious assertion of the physical might of the Nation, but only the vindication of right, of human right, of which we are only a single champion.

When I addressed the Congress on the 26th of February last, I thought that it would suffice to assert our neutral rights with arms, our right to use the seas against unlawful interference, our right to keep our people safe against unlawful violence. But armed neutrality, it now appears, is impracticable. Because submarines are in effect outlaws, when used as the German submarines have been used against merchant shipping, it is impossible to defend ships against their attacks, as the law of nations has assumed that merchantmen would defend themselves against privateers or cruisers, visible craft giving chase upon the open sea. It is common prudence in such circumstances, grim necessity, indeed, to endeavor to destroy them before they have shown their own intention. They must be dealt with upon sight, if dealt with at all.

The German Government denies the right of neutrals to use arms at all within the areas of the sea which it has proscribed, even in the defense of rights which no modern publicist has ever before questioned their right to defend. The intimation is conveyed that the armed guards which we have placed on our merchant ships will be treated as beyond the pale of law and subject to be dealt with as pirates would be. Armed neutrality is

ineffectual enough at best; in such circumstances and in the face of such pretensions it is worse than ineffectual; it is likely only to produce what it was meant to prevent; it is practically certain to draw us into the war without either the rights or the effectiveness of belligerents. There is one choice we cannot make, we are incapable of making: we will not choose the path of submission and suffer the most sacred rights of our Nation and our people to be ignored or violated. The wrongs against which we now array ourselves are not common wrongs; they cut to the very roots of human life.

With a profound sense of the solemn and even tragical character of the step I am taking, and of the grave responsibilities which it involves, but in unhesitating obedience to what I deem my constitutional duty, I advise that the Congress declare the recent course of the Imperial German Government to be in fact nothing less than war against the Government and people of the United States; that it formally accept the status of belligerent which has thus been thrust upon it; and that it take immediate steps not only to put the country in a more thorough state of defense, but also to exert all its power and employ all its resources to bring the Government of the German Empire to terms and end the war.

What this will involve is clear. It will involve the utmost practicable coöperation in counsel and action with the Governments now at war with Germany, and, as incident to that, the extension to those Governments of the most liberal financial credits, in order that our resources may so far as possible be added to theirs.

It will involve the organization and mobilization of all the material resources of the country to supply the materials of war and serve the incidental needs of the nation in the most abundant and yet the most economical and efficient way possible.

It will involve the immediate full equipment of the navy in all respects, but particularly in supplying it with the best means of dealing with the enemy's submarines.

It will involve the immediate addition to the armed forces of the United States, already provided for by law in case of war, of at least five hundred thousand men who should, in my opinion, be chosen upon the principle of universal liability to service, and also the authorization of subsequent additional increments of equal force so soon as they may be needed and can be handled in training.

It will involve also, of course, the granting of adequate credits to the Government, sustained, I hope, so far as they can equitably be sustained by the present generation, by well-conceived taxation.

I say sustained so far as may be equitable by taxation, because it seems to me that it would be most unwise to base the credits, which will now be necessary, entirely on money borrowed. It is our duty, I most respectfully urge, to protect our people, so far as we may, against the very serious hardships and evils which would be likely to arise out of the inflation which would be produced by vast loans.

In carrying out the measures by which these things are to be accomplished, we should keep constantly in mind the wisdom of interfering as little as possible in our own preparation and in the equipment of our own military forces with the duty — for it will be a very practical duty — of supplying the nations already at war with Germany with the materials which they can obtain only from us or by our assistance. They are in the field and we should help them in every way to be effective there.

I shall take the liberty of suggesting, through the several executive departments of the Government, for the consideration of your committees, measures for the accomplishment of the several objects I have mentioned. I hope that it will be your pleasure to deal with them as having been framed after very careful thought by the branch of the Government upon whom the responsibility of conducting the war and safeguarding the Nation will most directly fall.

While we do these things, these deeply momentous things, let us be very clear, and make very clear to all the world, what our motives and our objects are. My own thought has not been driven from its habitual and normal course by the unhappy events of the last two months, and I do not believe that the thought of the Nation has been altered or clouded by them. I have exactly the same things in mind now that I had in mind when I addressed the Senate on the 22d of January last; the same that I had in mind when I addressed the Congress on the 3d of February and on the 26th of February. Our object now, as then, is to vindicate the principles of peace and justice in the life of the world as against selfish and autocratic power, and to set up among the really free and self-governed peoples of the world such a concert of purpose and of action as will henceforth insure the observance of those principles.

Neutrality is no longer feasible or desirable where the peace of the world is involved and the freedom of its peoples, and the menace to that peace and freedom lies in the existence of autocratic governments, backed by organized force which is controlled wholly by their will, not by the will of their people. We have seen the last of neutrality in such circumstances. We are at the beginning of an age in which it will be insisted that the same standards of conduct and of responsibility for wrong done shall be observed among nations and their Governments that are observed among the individual citizens of civilized States.

We have no quarrel with the German people. We have no feeling toward them but one of sympathy and friendship. It was not upon their impulse that their Government acted in entering this war. It was not with their previous knowledge or approval. It was a war determined upon as wars used to be determined upon in the old, unhappy days, when peoples were nowhere consulted by their rulers and wars were provoked and waged in the interest of dynasties or of little groups of ambitious men who were accustomed to use their fellowmen as pawns and tools.

Self-governed nations do not fill their neighbor States with spies or set the course of intrigue to bring about some critical posture of affairs which will give them an opportunity to strike and make conquest. Such designs can be successfully worked out only under cover and where no one has the right to ask questions. Cunningly contrived plans of deception or aggression, carried, it may be, from generation to generation, can be worked out and kept from the light only within the privacy of courts or behind the carefully guarded confidences of a narrow and privileged class. They are happily impossible where public opinion commands and insists upon full information concerning all the Nation's affairs.

A steadfast concert for peace can never be maintained except by a partnership of democratic nations. No autocratic Government could be trusted to keep faith within it or observe its covenants. It must be a league of honor, a partnership of opinion. Intrigue would eat its vitals away; the plottings of inner circles who could plan what they would and render account to no one would be a corruption seated at its very heart. Only free peoples can hold their purpose and their honor steady to a common end and prefer the interests of mankind to any narrow interest of their own.

Does not every American feel that assurance has been added to our hope for the future peace of the world by the wonderful and heartening things that have been happening within the last few weeks in Russia? Russia was known by those who knew it best to have been always in fact democratic at heart, in all the vital habits of her thought, in all the intimate relationships of her people that spoke their natural instinct, their habitual attitude toward life. The autocracy that crowned the summit of her political structure, long as it had stood and terrible as was the reality of its power, was not in fact Russian in origin, character, or purpose; and now it has been shaken off and the great, generous Russian people have been added, in all their native majesty and might, to the forces that are fighting for

freedom in the world, for justice, and for peace. Here is a fit partner for a league of honor.

One of the things that has served to convince us that the Prussian autocracy was not and could never be our friend is that from the very outset of the present war it has filled our unsuspecting communities, and even our offices of government, with spies, and set criminal intrigues everywhere afoot against our National unity of counsel, our peace within and without, our industries and our commerce. Indeed, it is now evident that its spies were here even before the war began; and it is unhappily not a matter of conjecture, but a fact proved in our courts of justice, that the intrigues, which have more than once come perilously near to disturbing the peace and dislocating the industries of the country, have been carried on at the instigation, with the support, and even under the personal direction of official agents of the Imperial Government, accredited to the Government of the United States.

Even in checking these things and trying to extirpate them we have sought to put the most generous interpretation possible upon them because we knew that their course lay, not in any hostile feeling or purpose of the German people toward us (who were, no doubt, as ignorant of them as we ourselves were), but only in the selfish designs of a Government that did what it pleased and told its people nothing. But they have played their part in serving to convince us at last that the Government entertains no real friendship for us, and means to act against our peace and security at its convenience. That it means to stir up enemies against us at our very doors the intercepted note to the German Minister at Mexico City is eloquent evidence.

We are accepting this challenge of hostile purpose because we know that in such a Government, following such methods, we can never have a friend; and that in the presence of its organized power, always lying in wait to accomplish we know not what purpose, can be no assured security for the democratic Governments of the world. We are now about to accept the

gage of battle with this natural foe to liberty and shall, if necessary, spend the whole force of the nation to check and nullify its pretensions and its power. We are glad, now that we see the facts with no veil of false pretense about them, to fight thus for the ultimate peace of the world and for the liberation of its peoples, the German people included; for the rights of nations, great and small, and the privilege of men everywhere to choose their way of life and of obedience. The world must be made safe for democracy. Its peace must be planted upon the tested foundations of political liberty.

We have no selfish ends to serve. We desire no conquest, no dominion. We seek no indemnities for ourselves, no material compensation for the sacrifices we shall freely make. We are but one of the champions of the rights of mankind. We shall be satisfied when those rights have been made as secure as the faith and the freedom of nations can make them.

Just because we fight without rancor and without selfish object, seeking nothing for ourselves but what we shall wish to share with all free peoples, we shall, I feel confident, conduct our operations as belligerents without passion and ourselves observe with proud punctilio the principles of right and of fair play we profess to be fighting for.

I have said nothing of the Governments allied with the Imperial Government of Germany because they have not made war upon us or challenged us to defend our right and our honor. The Austro-Hungarian Government has, indeed, avowed its unqualified endorsement and acceptance of the reckless and lawless submarine warfare, adopted now without disguise by the Imperial German Government, and it has therefore not been possible for this Government to receive Count Tarnowski, the Ambassador recently accredited to the Government by the Imperial and Royal Government of Austria-Hungary; but that Government has not actually engaged in warfare against citizens of the United States on the seas, and I take the liberty, for the present at least, of postponing a discussion of our relations with

the authorities at Vienna. We enter this war only where we are clearly forced into it because there are no other means of defending our right.

It will be all the easier for us to conduct ourselves as belligerents in a high spirit of right and fairness because we act without animus, not with enmity toward a people or with the desire to bring any injury or disadvantage upon them, but only an armed opposition to an irresponsible Government which has thrown aside all considerations of humanity and of right and is running amuck.

We are, let me say again, the sincere friends of the German people, and shall desire nothing so much as the early reestablishment of intimate relations of mutual advantage between us, however hard it may be for them for the time being to believe that this is spoken from our hearts. We have borne with their present Government through all these bitter months because of that friendship, exercising a patience and forbearance which would otherwise have been impossible.

We shall happily still have an opportunity to prove that friendship in our daily attitude and actions toward the millions of men and women of German birth and native sympathy who live among us and share our life, and we shall be proud to prove it toward all who are in fact loyal to their neighbors and to the Government in the hour of test. They are most of them as true and loyal Americans as if they had never known any other fealty or allegiance. They will be prompt to stand with us in rebuking and restraining the few who may be of a different mind and purpose. If there should be disloyalty, it will be dealt with with a firm hand of stern repression; but, if it lifts its head at all, it will lift it only here and there and without countenance except from a lawless and malignant few.

It is a distressing and oppressive duty, gentlemen of the Congress, which I have performed in thus addressing you. There are, it may be, many months of fiery trial and sacrifice ahead of us. It is a fearful thing to lead this great, peaceful people into

war, into the most terrible and disastrous of all wars, civilization itself seeming to be in the balance.

But the right is more precious than peace, and we shall fight for the things which we have always carried nearest our hearts — for democracy, for the right of those who submit to authority to have a voice in their own Governments, for the rights and liberties of small nations, for a universal dominion of right by such a concert of free peoples as shall bring peace and safety to all nations and make the world itself at last free.

To such a task we can dedicate our lives and our fortunes, everything that we are and everything that we have, with the pride of those who know that the day has come when America is privileged to spend her blood and her might for the principles that gave her birth and happiness and the peace which she has treasured.

God helping her, she can do no other.

THE COÖPERATION OF ENGLISH-SPEAKING PEOPLES¹

ARTHUR JAMES BALFOUR

Mr. President, Gentlemen of the Chamber: The noble words to which we have just listened struck, I am well convinced, a sympathetic chord in the heart of everyone in your audience, but I don't think that in all the multitude gathered here to-day there was one to whom they went more home than to myself. Mr. President, I have had as the dream of my life a hope that before I died the union between the English-speaking, freedom-loving branches of the human race should be drawn far closer than in the past, and that all temporary causes of difference which may ever have separated two great peoples would be seen in its true and just proportion, and that we should all realize, on whatever side of the Atlantic fortune had placed us, that the things wherein we have differed in the past sink into absolute insignificance compared with those vital agreements which at all times, but never at such a time as the present, unite us in one great spiritual whole.

My friend Mr. Choate, in a speech that he delivered yesterday at the City Hall, told his audience that as Ambassador to Great Britain he had been in close official relations with me through many years, and that during all of these years I had stood solid — I think that was his phrase — for American friendship. That is strictly and absolutely true, and the feelings that I have this great opportunity of expressing are not born, believe me, of the necessities of the Great War; they are not the offspring of recent events; they are based upon my most enduring convictions,

¹ Speech made before the New York Chamber of Commerce, May 12, 1917, by the head of the British Mission to the United States.

convictions of which I cannot remember the beginning, which I have held with unalterable fidelity through the political life which is now a long life, and which, I am quite sure, I shall cherish to the end.

You, Mr. President, have referred to the preparations that were made only, I suppose, a little more than two years and a half ago — though how long those two and a half years seem to all of us! — preparations that were made two and a half years ago to celebrate the one hundred years of peace between our two countries. I ardently supported that movement, and yet the very phrases in which its objects were expressed show how inadequate it was to reach the real truth and heart of the matter. It is true that one hundred years have passed, and many hundreds of years, I hope, were to pass, before any overt act of war should divide those whom, as you said in your final words, should never be asunder. But, after all, normal and official peace is but a small thing compared with that intimate mutual comprehension which ought always to bind the branches of the English-speaking peoples together. You have absorbed in your midst many admirable citizens drawn from all parts of Europe, whom American institutions and American ways of thought have molded and are molding into one great people. I rejoice to think it should be so. A similar process on a smaller scale is going on in the self-governing dominions of the British Empire. It is a good process; it is a noble process. Let us never forget that wherever be the place in which that great and beneficent process is going on, whether it be in Canada, whether it be in Australia, or whether on the largest scale of all it be in the United States of America, the spirit which the immigrant absorbs is a spirit in all these places largely due to a historic past in which your forefathers and my forefathers, gentlemen, all had their share.

You incidentally mentioned, Mr. President, that this very body I am addressing dates the origin of its society to a charter, I think you said of 1758. Is not that characteristic and symbolic of what happens on both sides of the Atlantic? We strike

our roots into a distant past. We have known how through revolutions, in spite of revolutions, sometimes because of revolutions, we have known how to weld the past and the present into one organic whole, and I see around me in a country which calls itself and is, in one sense, a new country — I everywhere see signs of these roots which draw their nourishment and their strength from epochs far removed from us, and I feel when I talk to those who are born and bred under the American flag, who have absorbed all their political ideas from American institutions — I feel, and I think I speak for my friends here that they also feel — I feel that I am speaking to those brought up, as it were, under one influence, in one house, under one set of educational conditions. I require no explanations of what they think, and I am required to give no explanations of what I think, because our views of great questions seem to be shared — born, as it were, of common knowledge which we know instinctively, and which we do not require explicitly to expound or to define.

This is a great heritage to have in common, and I think, nay, I am sure, that you, Mr. President, struck a true note when you told us that all the sentiments which I have imperfectly tried to express this afternoon will receive a double significance, an infinitely increased significance from the fact that we are now not merely sharing a common political ideal in some speculative fashion, but that all of us are committed to sacrificing everything that we hold most dear to carry these ideals into practical execution.

There will be a bond of union between our peoples which nothing will ever be able to shake, and which I believe to be the securest guarantee for the future of the world, for the future peace and freedom of the world.

Mr. President, I have already detained you too long, but there was one word which fell from you toward the end of your speech upon post-war problems and you indicated your view — a view which I personally entirely share — that when this tremendous

conflict has drawn to its appointed close, and when, as I believe, victory shall have crowned our joint efforts, there will arise not merely between nations, but within nations, a series of problems which will tax all our statesmanship to deal with. I look forward to that time, not, indeed, wholly without anxiety, but in the main with hope and with confidence; and one of the reasons of that hope and one of the foundations of that confidence is to be found in the fact that your nation and my nation will have so much to do with the settlement of the questions. I do not think anybody will accuse me of being insensible to the genius and to the accomplishments of other nations. I am one of those who believe that only in the multitude of different forms of culture can the completed movement of progress have all the variety in unity of which it is capable; and, while I admire other cultures, and while I recognize how absolutely all-important they are to the future of mankind, I do think that among the English-speaking peoples is especially and peculiarly to be found a certain political moderation in all classes, which gives one the surest hope of dealing in a reasonably progressive spirit with social and political difficulties. And without that reasonable moderation, interchanges are violent also, and the smooth advance of humanity is seriously interfered with. I believe that on this side of the Atlantic, and I hope on the other side of the Atlantic, when these great problems have actively to be dealt with, it will not be beyond the reach of your statesmanship or of our own to deal with them in such a manner that we cannot merely look back upon this great war as the beginning of a time of improved international relations, of settled peace, of deliberate refusal to pour out oceans of blood to satisfy some notion of domination; but that in addition to those blessings the war may prove to be the beginning of a revived civilization, which will be felt in all departments of human activity, which will not merely touch the material but also the spiritual side of mankind, and which will make the second decade of the twentieth century memorable in the history of mankind.

THE MORAL EQUIVALENT OF WAR¹

WILLIAM JAMES

THE war against war is going to be no holiday excursion or camping party. The military feelings are too deeply grounded to abdicate their place among our ideals until better substitutes are offered than the glory and shame that come to nations as well as to individuals from the ups and downs of politics and the vicissitudes of trade. There is something highly paradoxical in the modern man's relation to war. Ask all our millions, north and south, whether they would vote now (were such a thing possible) to have our war for the Union expunged from history, and the record of a peaceful transition to the present time substituted for that of its marches and battles, and probably hardly a handful of eccentrics would say yes. Those ancestors, those efforts, those memories and legends, are the most ideal part of what we now own together, a sacred spiritual possession worth more than all the blood poured out. Yet ask those same people whether they would be willing in cold blood to start another civil war now to gain another similar possession, and not one man or woman would vote for the proposition. In modern eyes, precious though wars may be, they must not be waged solely for the sake of the ideal harvest. Only when forced upon one, only when an enemy's injustice leaves us no alternative, is a war now thought permissible.

It was not thus in ancient times. The earlier men were hunting men, and to hunt a neighboring tribe, kill the males, loot the village, and possess the females was the most profitable, as well as the most exciting, way of living. Thus were the more martial

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tribes selected, and in chiefs and peoples a pure pugnacity and love of glory came to mingle with the more fundamental appetite for plunder.

Modern war is so expensive that we feel trade to be a better avenue to plunder; but modern man inherits all the innate pugnacity and all the love of glory of his ancestors. Showing war's irrationality and horror is of no effect upon him. The horrors make the fascination. War is the *strong* life; it is life *in extremis*; war taxes are the only ones men never hesitate to pay, as the budgets of all nations show us.

History is a bath of blood. The Iliad is one long recital of how Diomedes and Ajax, Sarpedon and Hector, *killed*. No detail of the wounds they made is spared us, and the Greek mind fed upon the story. Greek history is a panorama of jingoism and imperialism — war for war's sake, all the citizens being warriors. It is horrible reading, because of the irrationality of it all — save for the purpose of making "history" — and the history is that of the utter ruin of a civilization in intellectual respects perhaps the highest the earth has ever seen.

Those wars were purely piratical. Pride, gold, women, slaves, excitement, were their only motives. In the Peloponnesian War, for example, the Athenians asked the inhabitants of Melos (the island where the "Venus of Milo" was found), hitherto neutral, to own their lordship. The envoys meet, and hold a debate which Thucydides gives in full, and which, for sweet reasonableness of form, would have satisfied Matthew Arnold. "The powerful exact what they can," said the Athenians, "and the weak grant what they must." When the Meleans say that sooner than be slaves they will appeal to the gods, the Athenians reply: "Of the gods we believe and of men we know that, by a law of their nature, wherever they can rule they will. This law was not made by us, and we are not the first to have acted upon it; we did but inherit it, and we know that you and all mankind, if you were as strong as we are, would do as we do. So much for the gods; we have told you why we expect to stand as

high in their good opinion as you." Well, the Meleans still refused, and their town was taken. "The Athenians," Thucydides quietly says, "thereupon put to death all who were of military age and made slaves of the women and children. They then colonized the island, sending thither five hundred settlers of their own."

Alexander's career was piracy pure and simple, nothing but an orgy of power and plunder, made romantic by the character of the hero. There was no rational principle in it, and the moment he died his generals and governors attacked one another. The cruelty of those times is incredible. When Rome finally conquered Greece, Paulus Æmilius was told by the Roman Senate to reward his soldiers for their toil by "giving" them the old kingdom of Epirus. They sacked seventy cities and carried off a hundred and fifty thousand inhabitants as slaves. How many they killed I know not; but in Etolia they killed all the senators, five hundred and fifty in number. Brutus was "the noblest Roman of them all," but to reanimate his soldiers on the eve of Philippi he similarly promises to give them the cities of Sparta and Thessalonica to ravage, if they win the fight.

Such was the gory nurse that trained societies to cohesiveness. We inherit the warlike type; and for most of the capacities of heroism that the human race is full of we have to thank this cruel history. Dead men tell no tales, and if there were any tribes of other type than this they have left no survivors. Our ancestors have bred pugnacity into our bone and marrow, and thousands of years of peace won't breed it out of us. The popular imagination fairly fattens on the thought of wars. Let public opinion once reach a certain fighting pitch, and no ruler can withstand it. In the Boer War both governments began with bluff, but couldn't stay there; the military tension was too much for them. In 1898 our people had read the word WAR in letters three inches high for three months in every newspaper. The pliant politician McKinley was swept away by their eagerness, and our squalid war with Spain became a necessity.

At the present day, civilized opinion is a curious mental mixture. The military instinct and ideals are as strong as ever, but are confronted by reflective criticisms which sorely curb their ancient freedom. Innumerable writers are showing up the bestial side of military service. Pure loot and mastery seem no longer morally avowable motives, and pretexts must be found for attributing them solely to the enemy. England and we, our army and navy authorities repeat without ceasing, arm solely for "peace"; Germany and Japan it is who are bent on loot and glory. "Peace" in military mouths to-day is a synonym for "war expected." The word has become a pure provocative, and no government wishing peace sincerely should allow it ever to be printed in a newspaper. Every up-to-date dictionary should say that "peace" and "war" mean the same thing, now *in posse*,¹ now *in actu*.² It may even reasonably be said that the intensely sharp competitive *preparation* for war by the nations is the *real war*, permanent, unceasing; and that the battles are only a sort of public verification of the mastery gained during the "peace" interval.

It is plain that on this subject civilized man has developed a sort of double personality. If we take European nations, no legitimate interest of any one of them would seem to justify the tremendous destructions which a war to compass it would necessarily entail. It would seem as though common sense and reason ought to find a way to reach agreement in every conflict of honest interests. I myself think it our bounden duty to believe in such international rationality as possible. But, as things stand, I see how desperately hard it is to bring the peace party and the war party together, and I believe that the difficulty is due to certain deficiencies in the program of pacifism which set the militarist imagination strongly, and to a certain extent justifiably, against it. In the whole discussion both sides are on imaginative and sentimental ground. It is but one utopia against another, and everything one says must be abstract

¹ *In posse*, as a possibility.

² *In actu*, as a fact.

and hypothetical. Subject to this criticism and caution, I will try to characterize in abstract strokes the opposite imaginative forces, and point out what to my own very fallible mind seems the best utopian hypothesis, the most promising line of conciliation.

In my remarks, pacifist though I am, I will refuse to speak of the bestial side of the war régime (already done justice to by many writers) and consider only the higher aspects of militaristic sentiment. Patriotism no one thinks discreditable; nor does anyone deny that war is the romance of history. But inordinate ambitions are the soul of every patriotism, and the possibility of violent death the soul of all romance. The militarily patriotic and romantic-minded everywhere, and especially the professional military class, refuse to admit for a moment that war may be a transitory phenomenon in social evolution. The notion of a sheep's paradise like that revolts, they say, our higher imagination. Where then would be the steeps of life? If war had ever stopped, we should have to reinvent it, on this view, to redeem life from flat degeneration.

Reflective apologists for war at the present day all take it religiously. It is a sort of sacrament. Its profits are to the vanquished as well as to the victor; and quite apart from any question of profit, it is an absolute good, we are told, for it is human nature at its highest dynamic. Its "horrors" are a cheap price to pay for rescue from the only alternative supposed, of a world of clerks and teachers, of coeducation and zoöphily, of "consumers' leagues" and "associated charities," of industrialism unlimited and feminism unabashed. No scorn, no hardness, no valor any more! Fie upon such a cattleyard of a planet!

So far as the central essence of this feeling goes, no healthy-minded person, it seems to me, can help to some degree partaking of it. Militarism is the great preserver of our ideals of hardihood, and human life with no use for hardihood would be contemptible. Without risks or prizes for the darer, history would be insipid indeed; and there is a type of military character which everyone feels that the race should never cease to breed, for

everyone is sensitive to its superiority. The duty is incumbent on mankind, of keeping military characters in stock — of keeping them, if not for use, then as ends in themselves and as pure pieces of perfection, — so that Roosevelt's weaklings and mollycoddles may not end by making everything else disappear from the face of nature.

This natural sort of feeling forms, I think, the innermost soul of army writings. Without any exception known to me, militarist authors take a highly mystical view of their subject, and regard war as a biological or sociological necessity, uncontrolled by ordinary psychological checks and motives. When the time of development is ripe the war must come, reason or no reason, for the justifications pleaded are invariably fictitious. War is, in short, a permanent human *obligation*. General Homer Lea in his recent book, *The Valor of Ignorance*, plants himself squarely on this ground. Readiness for war is for him the essence of nationality, and ability in it the supreme measure of the health of nations.

Nations, General Lea says, are never stationary — they must necessarily expand or shrink, according to their vitality or decrepitude. Japan now is culminating; and by the fatal law in question it is impossible that her statesmen should not long since have entered, with extraordinary foresight, upon a vast policy of conquest — the game in which the first moves were her wars with China and Russia and her treaty with England, and of which the final objective is the capture of the Philippines, the Hawaiian Islands, Alaska, and the whole of our coast west of the Sierra Passes. This will give Japan what her ineluctable vocation as a state absolutely forces her to claim, the possession of the entire Pacific Ocean; and to oppose these deep designs we Americans have, according to our author, nothing but our conceit, our ignorance, our commercialism, our corruption, and our feminism. General Lea makes a minute technical comparison of the military strength which we at present could oppose to the strength of Japan, and concludes that the islands, Alaska,

Oregon, and Southern California would fall almost without resistance, that San Francisco must surrender in a fortnight to a Japanese investment, that in three or four months the war would be over, and our Republic, unable to regain what it had heedlessly neglected to protect sufficiently, would then "disintegrate," until perhaps some Cæsar should arise to weld us again into a nation.

A dismal forecast indeed! Yet not unplausible, if the mentality of Japan's statesmen be of the Cæsarian type of which history shows so many examples, and which is all that General Lea seems able to imagine. But there is no reason to think that women can no longer be the mothers of Napoleonic or Alexandrian characters; and if these come in Japan and find their opportunity, just such surprises as *The Valor of Ignorance* paints may lurk in ambush for us. Ignorant as we still are of the innermost recesses of Japanese mentality, we may be foolhardy to disregard such possibilities.

Other militarists are more complex and more moral in their considerations. The *Philosophie des Kriegen*, by S. R. Steinmetz, is a good example. War, according to this author, is an ordeal instituted by God, who weighs the nations in its balance. It is the essential form of the state, and the only function in which peoples can employ all their powers at once and convergently. No victory is possible save as the resultant of a totality of virtues, no defeat for which some vice or weakness is not responsible. Fidelity, cohesiveness, tenacity, heroism, conscience, education, inventiveness, economy, wealth, physical health and vigor — there isn't a moral or intellectual point of superiority that doesn't tell, when God holds his assizes and hurls the peoples upon one another. *Die Weltgeschichte ist das Weltgericht*¹; and Dr. Steinmetz does not believe that in the long run chance and luck play any part in apportioning the issues.

The virtues that prevail, it must be noted, are virtues anyhow, superiorities that count in peaceful as well as in military com-

¹ The history of the world is the judgment of the world.

petition; but the strain on them, being infinitely intenser in the latter case, makes war infinitely more searching as a trial. No ordeal is comparable to its winnowings. Its dread hammer is the welder of men into cohesive states, and nowhere but in such states can human nature adequately develop its capacity. The only alternative is "degeneration."

Dr. Steinmetz is a conscientious thinker, and his book, short as it is, takes much into account. Its upshot can, it seems to me, be summed up in Simon Patten's word, that mankind was nursed in pain and fear, and that the transition to a "pleasure economy" may be fatal to a being wielding no powers of defense against its disintegrative influences. If we speak of the *fear of emancipation from the fear régime*, we put the whole situation into a single phrase; fear regarding ourselves now taking the place of the ancient fear of the enemy.

Turn the fear over as I will in my mind, it all seems to lead back to two unwillingnesses of the imagination, one æsthetic, and the other moral: unwillingness, first to envisage a future in which army life, with its many elements of charm, shall be forever impossible, and in which the destinies of peoples shall nevermore be decided quickly, thrillingly, and tragically, by force, but only gradually and insipidly by "evolution"; and, secondly, unwillingness to see the supreme theater of human strenuousness closed, and the splendid military aptitudes of men doomed to keep always in a state of latency and never show themselves in action. These insistent unwillingnesses, no less than other æsthetic and ethical insistencies, have, it seems to me, to be listened to and respected. One cannot meet them effectively by mere counter-insistency on war's expensiveness and horror. The horror makes the thrill; and when the question is of getting the extremest and supremest out of human nature, talk of expense sounds ignominious. The weakness of so much merely negative criticism is evident — pacificism makes no converts from the military party. The military party denies neither the bestiality nor the horror, nor the expense; it only says that these things

tell but half the story. It only says that war is *worth* them; that, taking human nature as a whole, its wars are its best protection against its weaker and more cowardly self, and that mankind cannot *afford* to adopt a peace economy.

Pacifists ought to enter more deeply into the æsthetical and ethical point of view of their opponents. Do that first in any controversy, says J. J. Chapman; *then move the point*, and your opponent will follow. So long as anti-militarists propose no substitute for war's disciplinary function, no *moral equivalent* of war, analogous, as one might say, to the mechanical equivalent of heat, so long they fail to realize the full inwardness of the situation. And as a rule they do fail. The duties, penalties, and sanctions pictured in the utopias they paint are all too weak and tame to touch the military minded. Tolstoi's pacificism is the only exception to this rule, for it is profoundly pessimistic as regards all this world's values, and makes the fear of the Lord furnish the moral spur provided elsewhere by the fear of the enemy. But our socialistic peace advocates all believe absolutely in this world's values; and instead of the fear of the Lord and the fear of the enemy, the only fear they reckon with is the fear of poverty if one be lazy. This weakness pervades all the socialistic literature with which I am acquainted. Even in Lowes Dickinson's exquisite dialogue,¹ high wages and short hours are the only forces invoked for overcoming man's distaste for repulsive kinds of labor. Meanwhile men at large still live as they always have lived, under a pain-and-fear economy — for those of us who live in an ease economy are but an island in the stormy ocean — and the whole atmosphere of present-day utopian literature tastes mawkish and dishwatery to people who still keep a sense for life's more bitter flavors. It suggests, in truth, ubiquitous inferiority.

Inferiority is always with us, and merciless scorn of it is the keynote of the military temper. "Dogs, would you live forever?" shouted Frederick the Great. "Yes," say our utopians, "let us live forever, and raise our level gradually." The best

¹ *Justice and Liberty*, N. Y., 1909.

thing about our "inferiors" to-day is that they are as tough as nails, and physically and morally almost as insensitive. Utopianism would see them soft and squeamish, while militarism would keep their callousness, but transfigure it into a meritorious characteristic, needed by "the service," and redeemed by that from the suspicion of inferiority. All the qualities of a man acquire dignity when he knows that the service of the collectivity that owns him needs them. If proud of the collectivity, his own pride rises in proportion. No collectivity is like an army for nourishing such pride; but it has to be confessed that the only sentiment which the image of pacific cosmopolitan industrialism is capable of arousing in countless worthy breasts is shame at the idea of belonging to *such* a collectivity. It is obvious that the United States of America as they exist to-day impress a mind like General Lea's as so much human blubber. Where is the sharpness and precipitousness, the contempt for life, whether one's own, or another's? Where is the savage "yes" and "no," the unconditional duty? Where is the conscription? Where is the blood tax? Where is anything that one feels honored by belonging to?

Having said thus much in preparation, I will now confess my own utopia. I devoutly believe in the reign of peace and in the gradual advent of some sort of a socialistic equilibrium. The fatalistic view of the war function is to me nonsense, for I know that war-making is due to definite motives and subject to prudential checks and reasonable criticisms, just like any other form of enterprise. And when whole nations are the armies, and the science of destruction vies in intellectual refinement with the sciences of production, I see that war becomes absurd and impossible from its own monstrosity. Extravagant ambitions will have to be replaced by reasonable claims, and nations must make common cause against them. I see no reason why all this should not apply to yellow as well as to white countries, and I look forward to a future when acts of war shall be formally outlawed as between civilized peoples.

All these beliefs of mine put me squarely into the anti-militarist party. But I do not believe that peace either ought to be or will be permanent on this globe, unless the states pacifically organized preserve some of the old elements of army discipline. A permanently successful peace economy cannot be a simple pleasure economy. In the more or less socialistic future towards which mankind seems drifting we must still subject ourselves collectively to these severities which answer to our real position upon this only partly hospitable globe. We must make new energies and hardihoods continue the manliness to which the military mind so faithfully clings. Martial virtues must be the enduring cement; intrepidity, contempt of softness, surrender of private interest, obedience to command, must still remain the rock upon which states are built — unless, indeed, we wish for dangerous reactions against commonwealths fit only for contempt, and liable to invite attack whenever a center of crystallization for military-minded enterprise gets formed anywhere in their neighborhood.

The war party is assuredly right in affirming and reaffirming that the martial virtues, although originally gained by the race through war, are absolute and permanent human goods. Patriotic pride and ambition in their military form are, after all, only specifications of a more general competitive passion. They are its first form, but that is no reason for supposing them to be its last form. Men are now proud of belonging to a conquering nation, and without a murmur they lay down their persons and their wealth if, by so doing, they may fend off subjection. But who can be sure that *other aspects of one's country* may not, with time and education and suggestion enough, come to be regarded with similarly effective feelings of pride and shame? Why should men not some day feel that it is worth a blood tax to belong to a collectivity superior in *any* ideal respect? Why should they not blush with indignant shame if the community that owns them is vile in any way whatsoever? Individuals, daily more numerous, now feel this civic passion. It is only a question of

blowing on the spark till the whole population gets incandescent, and on the ruins of the old morals of military honor, a stable system of morals of civic honor builds itself up. What the whole community comes to believe in grasps the individual as in a vise. The war function has grasped us so far; but constructive interests may some day seem no less imperative, and impose on the individual a hardly lighter burden.

Let me illustrate my idea more concretely. There is nothing to make one indignant in the mere fact that life is hard, that men should toil and suffer pain. The planetary conditions once for all are such, and we can stand it. But that so many men, by mere accidents of birth and opportunity, should have a life of *nothing else* but toil and pain and hardness and inferiority imposed upon them, should have *no* vacation, while others natively no more deserving never get any taste of this campaigning life at all, — *this* is capable of arousing indignation in reflective minds. It may end by seeming shameful to all of us that some of us have nothing but campaigning, and others nothing but unmanly ease. If now — and this is my idea — there were, instead of military conscription a conscription of the whole youthful population to form for a certain number of years a part of the army enlisted against *Nature*, the injustice would tend to be evened out, and numerous other goods to the commonwealth would follow. The military ideals of hardihood and discipline would be wrought into the growing fiber of the people; no one would remain blind as the luxurious classes now are blind, to man's real relations to the globe he lives on, and to the permanently sour and hard foundations of his higher life. To coal and iron mines, to freight trains, to fishing fleets in December, to dishwashing, clothes washing, and window washing, to road building and tunnel making, to foundries and stokeholds, and to the frames of skyscrapers, would our gilded youths be drafted off, according to their choice, to get the childishness knocked out of them, and to come back into society with healthier sympathies and soberer ideas. They would have paid their blood tax, done their own part in the

~~immemorial human warfare against nature; they would tread the earth more proudly, the women would value them more highly, they would be better fathers and teachers of the following generation.~~

Such a conscription, with the state of public opinion that would have required it, and the many moral fruits it would bear, would preserve in the midst of a pacific civilization the manly virtues which the military party is so afraid of seeing disappear in peace. We should get toughness without callousness, authority with as little criminal cruelty as possible, and painful work done cheerily because the duty is temporary, and threatens not, as now, to degrade the whole remainder of one's life. I spoke of the "moral equivalent" of war. So far, war has been the only force that can discipline a whole community, and until an equivalent discipline is organized, I believe that war must have its way. But I have no serious doubt that the ordinary prides and shames of social man, once developed to a certain intensity, are capable of organizing such a moral equivalent as I have sketched, or some other just as effective for preserving manliness of type. It is but a question of time, of skillful propagandism, and of opinion-making men seizing historic opportunities.

The martial type of character can be bred without war. Strenuous honor and disinterestedness abound elsewhere. Priests and medical men are in a fashion educated to it, and we should all feel some degree of it imperative if we were conscious of our work as an obligatory service to the state. We should be *owned*, as soldiers are by the army, and our pride would rise accordingly. We could be poor, then, without humiliation, as army officers now are. The only thing needed henceforward is to inflame the civic temper as past history has inflamed the military temper. H. G. Wells, as usual, sees the center of the situation. "In many ways," he says, "military organization is the most peaceful of activities. When the contemporary man steps from the street of clamorous, insincere advertisement, push, adulteration, underselling, and intermittent employment into

the barrack yard, he steps on to a higher social plane, into an atmosphere of service and coöperation and of infinitely more honorable emulations. Here at least men are not flung out of employment to degenerate because there is no immediate work for them to do. They are fed and drilled and trained for better services. Here at least a man is supposed to win promotion by self-forgetfulness and not by self-seeking. And besides the feeble and irregular endowment of research by commercialism, its little shortsighted snatches at profit by innovation and scientific economy, see how remarkable is the steady and rapid development of method and appliances in naval and military affairs! Nothing is more striking than to compare the progress of civil conveniences which has been left almost entirely to the trader, to the progress in military apparatus during the last few decades. The house appliances of to-day, for example, are little better than they were fifty years ago. A house of to-day is still almost as ill-ventilated, badly heated by wasteful fires, clumsily arranged and furnished as the house of 1858. Houses a couple of hundred years old are still satisfactory places of residence, so little have our standards risen. But the rifle or battleship of fifty years ago was beyond all comparison inferior to those we possess: in power, in speed, in convenience alike. No one has a use now for such superannuated things."¹

Wells adds² that he thinks that the conceptions of order and discipline, the tradition of service and devotion, of physical fitness, unstinted exertion, and universal responsibility which universal military duty is now teaching European nations will remain a permanent acquisition, when the last ammunition has been used in the fireworks that celebrate the final peace. I believe as he does. It would be simply preposterous if the only force that could work ideals of honor and standards of efficiency into English or American natures should be the fear of being killed by the Germans or the Japanese. Great indeed is Fear; but it is not, as our military enthusiasts believe and try to make

¹ *First and Last Things*, 1908, p. 215.

² *Ibid.*, p. 226.

us believe, the only stimulus known for awakening the higher ranges of men's spiritual energy. The amount of alteration in public opinion which my utopia postulates is vastly less than the difference between the mentality of those black warriors who pursued Stanley's party on the Congo with their cannibal war cry of "Meat! Meat!" and that of the "general staff" of any civilized nation. History has seen the latter interval bridged over; the former one can be bridged over much more easily.

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